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# HISTORIC RESOURCES ASSESSMENT, TENNESSEE-TOMBIGBEE WATERWAY WILDLIFE MITIGATION PROJECT MOBILE AND TENSAW RIVER DELTAS, ALABAMA

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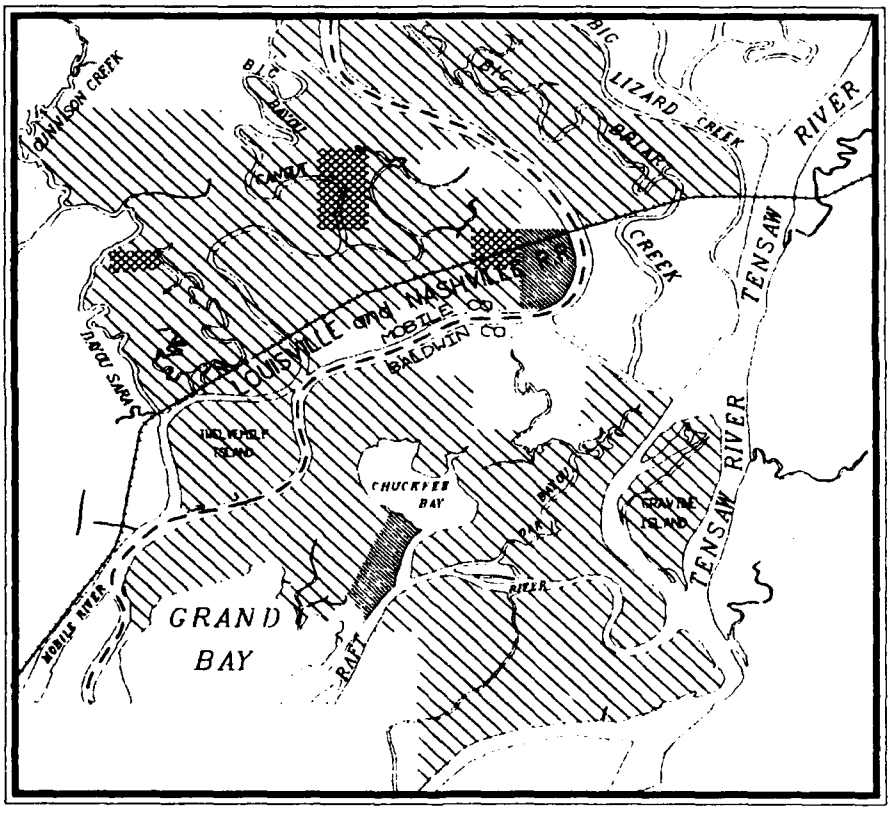




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An archaeological and historical reconnaissance of the Tenn-Tom Wildlife Mitigation lands, Mobile-Tensaw Deltas, Alabama was conducted in the summer of 1992. Archival research and a literature review preceded the fieldwork. A research design and models of site location and formation were developed to aid future research efforts in the region. Recommendations for future survey and testing in the area are also made.

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by
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with
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Report Submitted to the U.S. Army Corps of Engineers
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## ABSTRACT

An archaeological and historical reconnaissance of the Tennessee-Tombigbee Wildlife mitigation lands, Mobile-Tensaw Delta, Alabama was conducted during the summer of 1992. Archival research and a literature review preceded the fieldwork. A research design and models of site location and formation were developed to aid future research efforts in the region. Recommendations for future survey and testing in the area are also made.

A total of four previously recorded sites were revisited. Three of these, 1Mb97, 1Ba200, and 1Ba289, were recommended for further assessment and are considered potentially eligible to the National Register. Site 1Ba215 is considered ineligible to the National Register. Site 1Mb129, a newly recorded site, is recommended for limited assessment.

**ACKNOWLEDGEMENTS**

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Ms. Cindy Sutherland of the University of Alabama cartographics unit produced Figure 1 which is appreciated. To her and Mr. Craig Remington, I offer my thanks.

Personnel at Panamerican Consultants, Inc. made completing the project in a professional manner a breeze. Mr. Tim Elmore served as field assistant. The laboratory personnel at Panamerican were also extremely helpful. Mr. Terry Lolley produced the historic artifact tables. Ms. Lorraine Stevens and Ms. Cecile Mistovich helped in technical matters of report production. Mr. Steve Hack conducted the artifact photography and drafted the remaining figures. Finally, Mr. Tim Mistovich, president, Panamerican Consultants, Inc. provided administrative and moral support throughout the project.

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# CHAPTER I
# INTRODUCTION

The purpose of this document is to provide the Mobile District, U.S. Army Corps of Engineers with a cultural resources assessment of the Mobile-Tensaw Wildlife Mitigation project area, Mobile and Tensaw Delta, Alabama. The project area consists of approximately 21,000 acres within the Mobile-Tensaw Delta. The area is bounded on the west by Bayou Sara, on the east by the Tensaw River, on the south by Grand Bay and the Raft River, and to the north by Dead Lake (Figure 1). An overriding goal of the project was to provide the Mobile District Corps of Engineers with baseline data on the cultural resources of the area so that they may plan accordingly for future activities which may adversely affect these resources.

The following report provides the reader with background sections on the environment, archaeology, and history of the delta region. The archival, documentary, and literature review methods are explained as well as the field methods used during the survey. A detailed description is given of each site visited, and the materials recovered are categorized, enumerated, and illustrated. Component summaries and other relevant information are also given.

A research design and model of site location and formation which is applicable to the study area is presented in Chapter 6. The final chapter provides a brief summary and recommendations for future survey and testing projects.

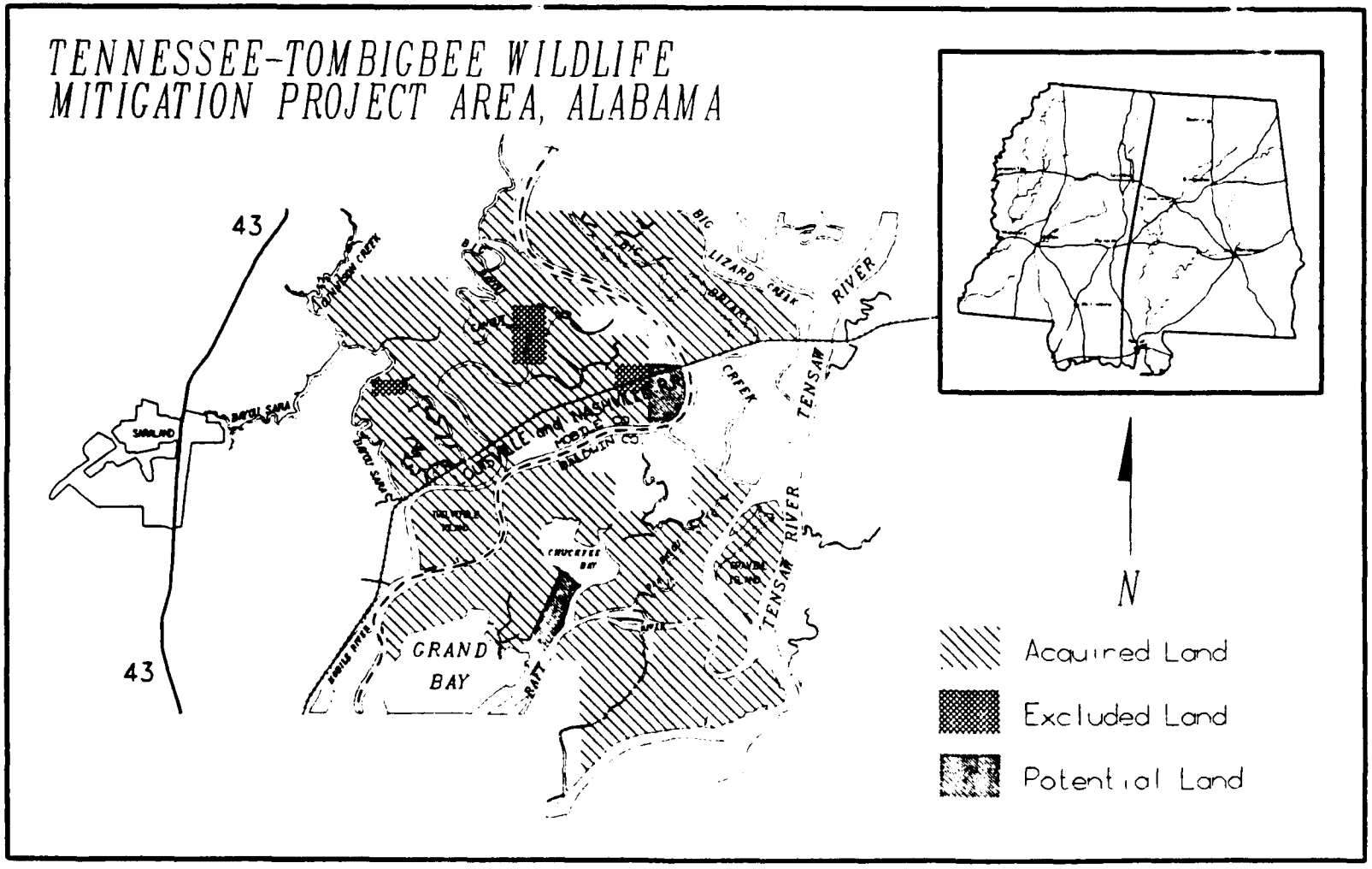


**Figure 1. Tennessee-Tombigbee Wildlife Mitigation Project Area, Alabama.**

## CHAPTER II
## ENVIRONMENTAL CONSIDERATIONS

The Mobile-Tensaw Delta region extends from the northern reaches of Mobile Bay northward some 40-50 miles to the juncture of the Alabama and Tombigbee Rivers (Figure 2). It lies within the Southern Pine Hills physiographic province of the eastern Gulf Coastal Plain in southwestern Alabama (Copeland 1968). This system serves as the outlet for the combined water discharge of the Tombigbee, Black Warrior, Alabama, Coosa, and Tallapoosa Rivers and is second only to the Mississippi River system in eastern North America. The delta is circumscribed to the east and west by escarpments which have effectively prevented the lateral migration of the delta. It is a unique region environmentally; this makes it attractive from the standpoint of studying the nature of cultural adaptations (Knight 1977; Stowe 1981).

Stowe (1981) has divided the Mobile-Tensaw bottomlands into three ecological zones which consist of 1) the upper delta/floodplain north of the Tombigbee-Alabama River junction, 2) the middle delta/bottomland hardwood forest, and 3) the lower delta/brackish water marsh which is generally less than 2 meters (m), or 5 feet, in elevation. The upland mixed forest is located at the edges of the delta and is generally more than 3 m (10 feet) in elevation (Figure 2).

Brose *et al.*(1983) have also divided the delta into three zones. They include 1) the delta meander zone, 2) the delta swamp zone, and 3) the delta marsh zone. The study area lies primarily within Stowe's lower delta/brackish water marsh zone (Figure 2) and Brose *et al.*'s (1983) delta marsh zone. However, the northern portion lies within the lower end of Stowe's middle delta/bottomland hardwood forest zone and Brose *et al.*'s (1983) delta swamp zone.

The vegetation of the study area is comprised primarily of marshes which contain a variety of grasses and sedges including reed (*Phragnites australis*), big cord grass (*Spartina cynosuroides*), wild rice (*Zizania aquatica*), saw grass (*Cladium jamaicense*), and alligator weed (*Alternanthera philoxeroides*) (Lelong 1983:303). Occasionally, widely dispersed shrubs and bushes occur, primarily on low hammocks which are slightly elevated above the marsh or along estuaries. Wetland species such as black willow (*Salix rugra*), green ash (*Fraxinus pennsylvanica*), maple (*Acer* sp.), and sweet bay (*Magnolia virginiana*) are found in transitional zones between the hammocks and marsh (Lelong 1983). Aquatic plants occur in abundance and are submerged, floating, or emergent along banks of streams and in bays and ponds (Lelong 1983).

As one moves northward, at the upper end of the lower delta, salinity decreases as more freshwater-tolerant species take over (Lelong 1983). The marshes gradually change over to the dense

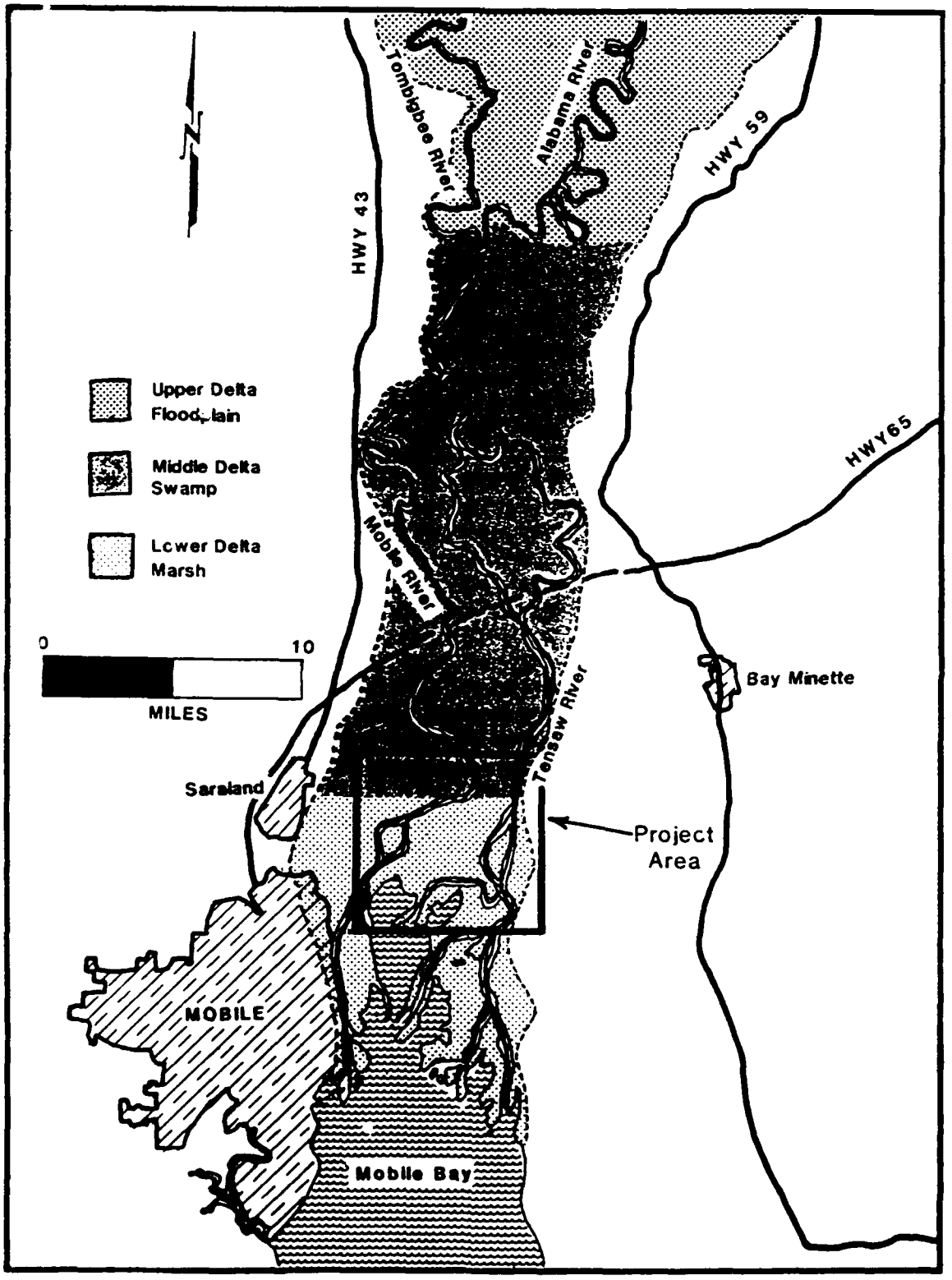


Figure 2. The Mobile-Tensaw Delta.

deltaic swamps characteristic of the middle delta or delta swamp zones. Trees which predominate in the delta swamp zone include bald cypress (*Taxodium distichum*), water tupelo (*Nyssa aquatica*), swamp tupelos (*Nyssa sylvatica* and *N.S.* var. *biflora*), Carolina ash (*Fraxinus caroliniana*), red maple (*Acer rubrum*), water elm (*Ulnus americana*), sweet bay, Virginia willow (*Itea virginica*), and winterberry (*Ilex verticillata*). These are found on slight rises in the floodplain. According to Lelong (1983), very few herbs grow in the dense middle deltaic swamp because of the general lack of sunlight resulting from the thick stands of bottomland hardwoods.

Lelong (1983) indicates that on slightly higher ground in the swamps, water oak (*Quercus nigra*), sugarberry (*Celtis laevigata*), honey locust (*Gleditsia triacanthos*), American hornbeam (*Carpinus caroliniana*), American holly (*Ilex opaca*), and sweet-gum (*Liquidambar styraciflua*) are present. Vines such as poison ivy (*Rhus toxicodendron*), trumpet creeper (*Campsis radicans*), cross vine (*Anisostichus capreolata*), pepper-vine (*Ampelopsis arborea*), greenbrier (*Smilax* sp.), and wild grapes (*Vitis* sp.) occur. Lelong (1983) indicates that higher locations within the swamp where archaeological sites are located often have a different vegetation than nearby areas. Species such as live oak (*Quercus virginiana*), red cedar (*Juniperus virginiana*), sugarberry, persimmon (*Diospyrus virginiana*), red buckeye (*Aesculus pavia*), buckthorn (*Rhamnus caroliniana*), red mulberry (*Morus rubra*), and dwarf palmetto (*Sabal minor*) occur.

The transition between the bottomland hardwood forest and the upland hardwood forests at the delta edge may include more mesic species such as southern magnolia (*Magnolia grandiflora*), sweetgum, swamp chestnut oak (*Quercus michauxii*), laurel oak (*Quercus laurifolia*), water oak, live oak, pignut hickory (*Carya glabra*), American beech (*Fagus grandiflora*), and silverbell (*Halesia carolina*) (Lelong 1983). Drier ridges support a more mixed open forest which contain nut-bearing species such as southern red oak (*Quercus falcata*), turkey oak (*Quercus laevis*), black jack oak (*Quercus narilandica*), post oak (*Quercus stellata*), and a host of berries and herbaceous plants such as blueberry (*Rubus* sp.), grasses, and legumes.

The Indians who inhabited the Mobile-Tensaw Delta region had access to a wide variety of animal species. By far the most visible animal food remains present in the study area are those of the marsh clam *Rangia cuneata*. This clam species is a prolific reproducer and is well-adapted to the changing salinity levels of the Mobile-Tensaw Delta (Jones 1980). Another mollusk potentially available to the delta residents is the oyster (*Crassostrea virginica*). However, oyster procurement was largely restricted to the coastal area along Mobile Bay (Curren 1976). Other marine shell such as *Busycon* sp. and Olive Nerite were potentially available and used for the manufacture of shell artifacts.

A host of mammals, reptiles, amphibians, and fishes were also available for exploitation. Mammals include white-tailed deer, opossum, raccoon, squirrel, and rabbit. Birds include wild turkey along with coot and other migratory waterfowl. Fish species potentially available include marine catfish, sturgeon, gar, mullet, croaker, and black drum. The alligator and a variety of snakes were present, along with various turtle species.

The following section provides an overview of the geomorphic formation of the Mobile-Tensaw deltaic region, along with a detailed description of landforms which are critical to our understanding of native and Anglo-American use of this environment.

## Mobile Delta Geomorphology

Eugene M. Wilson

### Introduction

The Historic Resources Assessment in connection with the Tennessee-Tombigbee Waterway Wildlife Mitigation, Mobile and Tensaw River Deltas, Alabama, is concerned with approximately 20,000 acres in one of the earth's most physically dynamic environments. In earth sciences, rapid and significant changes occur in areas of active vulcanism, earthquake zones, coastal zones, and river deltas. The latter, although not a product of violent forces, is nonetheless an area of rapid change in surface configuration through natural processes that include variations in water volume, velocity, erosion sediment transport, deposition, subsidence, and slower changes in surface elevation and in sea level fluctuations. The area of present study, in the delta of the Mobile River, has had some significant natural changes. However, its low elevation and periodic flooding has limited its human occupation and land use.

Some profound alterations have occurred worldwide in the past two million years. The "ice ages", during which continent-sized glaciers formed, grew, and disappeared, were brought about by very complex changes in earth-sun relations. These resulted in climate changes and associated ecological adjustments, in sea level rise and fall, in the formation of landbridges connecting continents and islands, in the emptying of coastal estuaries and bays, and in the entrenching of streams adjusting to the new shoreline and base level of water flow.

The most spectacular changes occurred in fairly recent geologic time, when sea level, in response to continental glaciation, dropped several times, the lowest level being 130 m (426 feet) below present. This time period, 115,000 to 10,000 B.P., is known as the Wisconsin glacial stage of the Pleistocene epoch. However, the whole epoch is being reorganized chronologically as a result of new and more refined dating techniques and as more studies provide new information.

At the maximum continental ice advance and lowest sea level of -130 meters, about 18,000 B.P., the coastline of the Gulf of Mexico was approximately 100 to 110 kilometers (km) farther south. The present submerged near-shore region was then forested, and early North Americans occupied this new part of the Coastal Plain. As streams cut deep valleys in response to low sea level, the former Mobile delta and floodplain existed only where the surface remnants had not eroded away. In the period from around 17,000 B.P., sea level rose overall, flooding the coastal zone, filling valleys, and again forming estuaries, bays, barrier islands, and beaches. River gradients became more gentle, and gradually - rapidly in geologic

time - floodplains and deltas formed again. This time, sea level did not return to its previous position but has remained, so far, about 6 m (18 feet) lower than the pre-Wisconsin high level at 124,000 B.P. (Bloom 1991:438).

## Mobile Delta and Late Pleistocene-Holocene Chronology

Pleistocene sea level changes resulting from continental glacial advance and retreat have caused alternating periods of stream entrenchment, valley filling, and coastal changes. This constitutes a major research area in geomorphology, and the literature is abundant. Reviews are to be found in May (1976), Lamb (1983), Matthews (1990), and Bloom (1991), to name only a few. Since the processes operating largely modify or destroy pre-existing features, we focus on the last stage of the epoch to understand the present landscape.

A chronology for the past 124,000 years shows that following a 6 m (18 feet) level above present at 124,000 B.P., six low sea level nadirs were obtained approximately at 115,000 B.P. (-70 m or 210 feet), 97,000 B.P. (-70 m or 210 feet), 75,000 B.P. (-50 m or 150 feet), 55,000 B.P. (-77 m or 240 feet), 35,000 B.P. (-65 m or 190 feet), and 18,000 B.P. (-130 m or 400 feet) (Bloom 1991:438). Five of these, perhaps all six, were low enough to have opened the Bering Landbridge, presently at approximately -46 m (-150 ft.). Following a rise to the present level at 107,000 B.P., sea level has remained lower than at present except possibly until about 6,000 B.P. to 3,000 B.P. This period, termed the Hypsithermal Interval, was warmer and drier than at present. The assumption is that high sea levels correspond to warm interglacial or interstadial climates and that low sea levels correspond to glacial stages or stadials. Thus, the Hypsithermal Interval probably resulted in higher sea level. Certain evidence has been interpreted to show that sea level at this interval was 2 m (6 feet) higher than at present along the Gulf Coast. Other studies have shown that sea level has not been above the present stand since shortly after 124,000 B.P.

In 1974, Holmes and Trickey, who had published a Mobile Bay chronology (Trickey 1958; Trickey and Holmes 1971), produced a comparison of Fairbridge's (1960) Late Holocene sea level curve with an archaeological site at Bryant's Landing on Tensaw Lake in the upper Mobile Delta. The site occupation levels occurred at the low sea levels according to Fairbridge at carbon 14 years of 4100 $\pm$ 250 B.P., 3090 $\pm$ 200 B.P., 2040 $\pm$ 150 B.P., and 1080 $\pm$ 150 B.P. In their view, ". . . this coincidence of data is too persuasive to be relegated as a random accident" (Holmes and Trickey 1974:124).

In another study of coastal landforms and processes of Alabama and west Florida, Stapor placed a 1.5 to 2.0 m higher sea level in the span 6,500 B.P. to 3,500 B.P. It was at this time, he

believes, that a scarp was cut into the pre-Holocene surface from Mobile Point to Alligator Point near Apalachicola, a distance of 400 km (Stapor 1975:139).

In a recent survey of the subject, Matthews (1990) established a sea level within less than 5 m (15 feet) of present sea level at approximately 5,000 B.P., based upon thirteen key papers he describes as having high-quality data. The subsequent 5,000 years still present a problem. Several studies of the Texas and Louisiana coasts also suggest that higher stand of sea level did occur, based upon observed features such as stream channels on low terrace surfaces in western Louisiana and southeast Mississippi, which can be seen on topographic maps.

A study of Mobile Bay and the delta by May (1976) included local carbon 14 dates to establish a sea level curve. This does not indicate a higher sea level stand during the Hypsithermal interval. It shows a level below present of 11 m (33 feet) at 6,500 B.P., 8.8 m at 6,000 B.P., and 4.3 m (12 feet) at about 3,000 B.P. A pronounced slowing of sedimentation in Mobile Bay has occurred since 6,500 B.P., which has "been a period of relative stability of the sedimentation rate within the estuary" (May 1976:11) and, by extension, in the delta. Rates of sediment accumulation vary from 2.74 centimeters (cm) (1 inch) to 20.42 cm (8 inches) per century. The Mobile Delta is extending into the head of the bay at a rate of over 300 m (900 feet) per century, but in the 19th century it is estimated to have grown as much as 600 m (1800 feet).

As sedimentation slowed, the first oysters (oldest dated oyster beds) appeared about 6,500 B.P. in the bottom of Mobile Bay, which was then near the present delta front, at 11 m (33 feet) depth below present level. As the rate of sea level rise slowed, the coastal barrier beaches began to form near their present locations. This altered the bay salinity and shifted the oyster habitat toward the lower half of the bay after about 4,000 B.P. At the rate of 300 m per century, the delta front would have been 4.2 km farther north when present sea level was reached, well below the present mitigation area.

No one has reconciled the variations in possible sea level stands in this area. The coastal scarps, abandoned stream channels on low terrace surfaces, and the Bryant's Landing site certainly make consideration of recent higher sea level stands important for accurate interpretation. The possibility of land surface instability with local uplift and fractures is another aspect of the problem for future study.

## Mobile Delta Description

Deltas consist of both land and water, that is, of river distributary channels and of the sediment carried and deposited by these channels. In time, a depositional plain is formed in an irregular prograding shoreline. The delta is both above and below the level of the water into which it flows. It includes fairly flat-lying layers behind the delta front called "topset beds", ahead of which are foreset beds of active deposition in a relatively steep slope. In front of these are bottomset beds deposited over finer sediment of the bay or sea floor. As a delta grows, it normally extends over the foreset and bottomset beds previously deposited.

A general classification of deltas may be made according to the available energy. High constructive deltas occur where fluvial action prevails (prograding deltas), and high destructive deltas occur where ocean, bay, or lake wave energy is high. The Mobile Delta empties into a relatively low energy environment and is a high constructive or prograding delta. As in all deltas, sediment compaction causes local subsidence and adds to the irregular outline of the delta.

The initial formation of deltas begins with channel flow moving into a relatively calm body of water. The water enters as a jet diminishing in velocity such that the sediment spreads out in a fan shape. Sediment also begins to be deposited in the middle of the channel from divergent flow; a mid-channel bar then directs the flow in two branches which become the initial distributaries. Sediment spills out along the channel sides to form a narrow deposit which eventually grows above the water level as the distributaries extend downstream. These are natural levees upon which herbaceous plants, shrubs, and eventually trees take root; it is also the location of human settlement in deltas. The mid-channel bar, between the two distributary channels, also accumulates sediment and grows into a triangular island. Between the distributaries and downstream from this island is a small bay or interdistributary basin. The basin gradually fills from sediment carried in from backflow and from smaller channels called crevasses that result from breaks in the natural levees. These crevasse channels may extend and widen to become distributaries and eventually fill the basins. The crevasse channels may close off at the upstream end as sediment accumulates around debris washing downstream. It then remains as a channel carrying wind- and tide-generated currents and local drainage in and out of the basin. All of these delta features are well-developed in the Mobile Delta plain.

## Mobile Delta Landforms

The present Mobile River Delta begins where the first distributaries form, 2.9 km (1.8 miles) south of Mount Vernon Landing. There the Mobile River separates into the Mobile River channel on the west and the Tensaw River on the east. The Tensaw branches into the Middle River flowing southward and continues as a smaller channel flowing eastward joining Tensaw Lake. After joining the lake, the Tensaw flows southward down the eastern side of the valley. Earlier prehistoric river channels are represented by Tensaw Lake, Stiggins Lake, and other smaller channels nearby. Clearly, a large river, probably the Alabama, possibly the Tombigbee, or the combined Tombigbee-Alabama, once flowed southward through the Tensaw Lake-Stiggins Lake channels. The term *bayou* has been used for these old channels, formerly active river courses or distributaries. The Bryant's Landing site on Tensaw Lake may reflect periods of increased deposition from floodwaters; this site and many others in the vicinity might provide a better understanding of the upper delta natural history based upon carbon 14 dating and ceramic sequences.

River floodplain features occur at, and northward of, the present junction of the Tombigbee and the Alabama Rivers. These include meandering channels, open and filled-in oxbow lakes (arcuate meander cut-off segments), natural levees, accretion ridges and swales, and backswamps. The Tombigbee and Alabama Rivers join to form the Mobile River which flows for 9.3 km (5.75 miles) as a single channel before separating into the two primary distributaries. This must be the shortest major river in the United States, technically speaking.

Natural levees of active or formerly active channels of the Mobile River, Stiggins Lake, and others enclose basins or backswamps in the upper delta. These basins are now largely filled except for the Big and Little Chippewa Lakes. In the middle delta, the T. Mifflin Lake and The Basin remain as partly filled basins. In the lower delta, a dozen open water basins exist, the largest being Grand Bay, Chacaloochee Bay, Polecat Bay (now largely filled by industrial waste mud from aluminum processing), Chuckfee Bay, Delvan Bay, and Ducker Bay. These are not features resulting primarily from subsidence and erosion and flooding, as suggested by Smith (1987). These basins were formed by active natural levee formation extending into the bay.

In the lower delta, large distributary channels are the major forms. These include the Mobile River, Tensaw River, Raft River, Spanish River, Apalachee River, and Blakeley River. Several islands were formed as these channels diverge and converge, including Twelvemile Island (12 miles above the foot of Government Street in Mobile), Gravine Island (after a French colonial official; pronounced "grayveen"), and Blakeley Island (for Josiah Blakeley).

The channel now called Dead Lake, on the west side of the delta, is likely a former channel of the Mobile River. When active, the Dead Lake course cut at the edge of a low terrace and probably continued south through Bayou Canot, which is still 4 to 5 m (12-22 feet) deep; it also may have gone through the east channel at Twelvemile Island. Bayou Sara, just west of Twelvemile Island, and Gunnison Creek which joins it, appear to have been tributaries, and at lower sea level stand must have been well-entrenched. The Bayou Sara channel is 3 to 5 m (10-20 feet) deep and seems to be adjusted to the present Mobile River. Little Catfish Bayou and Little Bayou Canot both may be interpreted as crevasse channels only recently closed off from Bayou Canot and the Mobile River, respectively. It seems likely that the sinuosity, or meandering effect, in many such channels is caused by a diminished gradient and wind- and tide-generated currents.

A recent channel closure observed during fieldwork on this assessment is Jims Creek, leading from the east Twelvemile Island channel into Grand Bay. The upstream end of Jims Creek lies a few yards behind a fishing camp house which sits on a filled-in area next to the former channel opening. The best example of a recently formed crevasse channel lies just south of Conway Creek and extends from the Tensaw River into northern Chacaloochee Bay. Probably opened in the 1950s by marsh buggies or by excavation, it has built a subdelta into the bay; its progress will serve as a model for other channels of its type. It nearly duplicates the Conway Creek crevasse which has almost filled the northern half of Chacaloochee Bay and divided it into three parts.

## Elevated Surfaces in the Delta

The Mobile Delta includes both natural and human-made elevated surfaces. The most extensive landforms above normal water level are the natural levees of the distributary system just discussed, which reach .5 to 1 m (2-3 feet).

However, the most prominent natural elevation in the assessment area is the sand ridge at Liveoak Landing on Bayou Sara, the top of which is above the 10 foot contour line (Chickasaw 7.5 min. quadrangle). A relatively homogeneous beige sand, the ridge is semicircular with the center drained by the upper branch of Catfish Bayou. The ridge is a detached part of the low river terrace 2 km to the west, separated by Bayou Sara. Other such elevations are located 4 km to the south on the west side of Bayou Sara and west of Bayou Black. Liveoak Landing ridge probably became separated by the entrenching Bayou Sara during the first major drop in sea level after 124,000 B.P. The low terrace represents the remaining part of a floodplain surface.

Human-made elevations in the assessment area include dredge spoil accumulations, railroad embankments, and habitation mounds

and ridges. The dredge spoil occurs along a canal just upstream from Twelvemile Island that connects the Mobile River with Big Briar Creek and with the Tensaw River at Gravine Island. It was dug to make a passage for some 100-150 World War II military vessels to anchor in the Tensaw River from Gravine Island north to Hurricane Landing. This fleet remained until the 1970s. Mounds of sand from the dredged channel occur along the south side of the canal and on the north end of Gravine Island, where the elevation was built up to about 7.5 m (22 feet).

Prehistoric occupation sites have been located at the west end of Liveoak Landing ridge, along natural levees of major distributary channels and on crevasse channels, and on the shores of the interdistributary basins. Further searches, particularly at autumn low water levels, may locate additional sites. Scattered along several of the major distributaries and in some of the partially filled basins are parallel ridges and other linear patterns which may mark the occupation at prehistoric sites. None appear to be within the present assessment area, but investigations should be made in future acquisitions.

# CHAPTER III
# DOCUMENTATION AND REVIEW OF PREVIOUS RESEARCH

## Archival/Records Search

Background/archival research was initiated for the Mobile-Tensaw Delta Tennessee-Tombigbee Wildlife Mitigation project in late June and completed in early July. The state site files at Moundville and those at the Alabama Historical Commission were examined to identify previously recorded sites in the study area. Previous investigators in the delta, in particular Mr. Read Stowe, Mr. Cailup Curren, and Dr. Eugene Wilson examined project maps and helped in locating additional sites. All previously recorded site locations were transferred to a set of USGS 7.5 min. topographic maps. Additionally, areas identified by local informants as possibly containing sites were designated on these maps. Aerial photographs were also used during reconnaissance.

Reports pertaining to the study area were examined at Moundville, the Alabama Historical Commission, and the U.S. Army Corps of Engineers, Mobile District to gain insight into the nature of cultural resources in the Mobile-Tensaw River Delta area. All relevant reports listed in the National Archaeological Data Base (NADB) files were examined. Local archaeologists and other researchers were contacted to obtain information regarding site location and the nature of the archaeological data base in the delta.

## Literature Review

A review of the National Archaeological Data Base file revealed that the majority of the work performed in the vicinity of the Mobile-Tensaw Delta in recent years has been in conjunction with oil and gas well pads and pipelines. Small survey reports in which no cultural resources were found are the rule, and they are too numerous to mention individually. A detailed review of previous research in the Mobile-Tensaw Delta region has been completed by Weisman and Brose (1983). The reader is referred to that source for an in-depth summary of previous archaeological and historical investigations in the Mobile-Tensaw Delta. The present review provides a concise summary of the more important work which has been accomplished over the past 100 years,and is taken primarily from Weisman and Brose (1983:13-24).

As early as 1899 Clarence Bloomfield Moore was investigating archaeological sites in the vicinity of the study area. In that year, he explored a mound at Twenty-Four Mile Bend and another mound at Twenty-One Mile Bluff on the Mobile River (Moore 1900). Moore found artifacts dating from the Late Gulf Formational and Middle Woodland time periods as well as some glass beads which were probably associated with an historic component at Twenty-One Mile Bluff. However, he found nothing at the other site. Moore (1905)

next reports on the location of three shell mounds on Simpson Island. These included two shell accumulations at the southern end of the island, the Blakeley site, and the Bottle Creek site. The Blakeley shell midden (1Ba299) has been the subject of many research efforts, including Stowe's (1977). The Bottle Creek site is perhaps the most famous in the delta, and it has been the subject of intermittent investigation. Following Moore's activities there, David DeJarnette conducted test excavations in 1932. Stowe (1981) reported on the site in his 1981 survey report on the Mobile-Tensaw bottomlands.

Walter B. Jones recorded sites in the delta marsh zone between 1929 and 1935, but no significant results were published (Weisman and Brose 1983). Many of these sites have been relocated, some several times (Curren and Stowe 1971; Stowe 1981). Steve Wimberly (1960) was an early pioneer in ceramic analysis in southwestern Alabama. His 1960 report provided the basic working chronology and framework for researchers in the area. He reported on work at many sites in Clarke County immediately to the north of the delta, analyzing very large ceramic samples from such sites as the McLeod site (1Ck2), James Village (1Ck5), Deas Village (1Ck16), the Porter site (1Ck21), the Beckum Village site (1Ck24), the Rocky Ford site (1Ck26), and the Beckum-Wilson Village site (1Ck27). Earlier, Wimberly and Tourtelot (1941) had reported on excavations at the McQuorquodale Mound (1Ck25).

Another early ceramic study close to the study area was that of Trickey (1958). He produced an accurate ceramic seriation (Weisman and Brose 1983) descriptions of sites near the study area, including the Douglas Mound, Gin House Island, Boggy Gut, 1Wn86, Salt Creek I and Salt Creek II, Horseshoe Bend, the Three Rivers Landing site, and Old Blakeley (1Ba229) (Weisman and Brose 1983).

A number of survey reports and site reports which are of concern to the present study were produced by archaeologists during the 1970s and early 1980s. Some of the more substantive work includes that of Curren and Stowe (1971) who surveyed, relocated, and reported on sites in the Mobile Tensaw Delta-delta marsh. Stowe (1981) also conducted an extensive survey of the Mobile-Tensaw bottomlands in which he provided detailed site descriptions and site locational information.

Stowe and Fuller (1982) conducted a cultural resources reconnaissance for the City of Saraland, also to the west of the project area, and noted certain sites in the area including 1Mb96 and the Smith sand mounds on the north bank of Chickasaw Creek. They found two Middle-Late Woodland sites on hammocks overlooking a backswamp. Stowe and Fuller (1982) go on to state that Woodland sites in the area are found consistently on "sandy knolls and hammocks adjacent to backswamps," noting that the sites appeared to be situated in an ecotone, in close proximity to "the cypress-tupelo swamps of the delta and the upland pine-hardwood forest."

DeJarnette (1976) conducted a major excavation at sites 1Ba196 and 1Ba251 on the eastern shore of Mobile Bay where Interstate-10 crosses. Historic period as well as Late Woodland Period ceramics were found along with animal and plant remains in a stratified context.

DeJarnette *et al.* (1978) conducted test excavations at two sites which reportedly contained Bayou La Batre Phase components near Black Bayou in the Mobile-Tensaw bottomlands (Weisman and Brose 1983). However, the grit tempered cord marked pottery reported from the site may actually belong to the Late Woodland Tensaw Lake Phase (Jenkins 1983; Fuller 1990).

Bense (1980) reported on test excavations at a Bayou La Batre site on Dead Lake, immediately to the north of the project area. Unfortunately, no intact deposits were encountered; however, she did attempt to integrate regional information on Bayou La Batre into her results.

In 1983 Spies and Rushing reported on excavations at the mouth of the Dog River and Mobile Bay. They note a Bayou La Batre component at the site and comment on the commonplace occurrence of these sites in a wide range of environments.

Brose *et al.* (1983) report the results of a cultural resources reconnaissance conducted for the Mobile District Corps of Engineers. Their study included sites located within the present project area in the delta swamp and delta marsh zones. Site locations and densities are modeled based on the limited data base. A wide range of special studies was an important part of the overall study including work on the ethnohistory (Lankford 1983), geomorphology (Lamb 1983), and vegetation (Lelong 1983).

Fuller and Stowe (1982) revised the taxonomic classification of Mississippian ceramics in the Mobile-Tensaw Delta region, defining several new types and varieties.

Synthetic works important to the present study include those of Trickey and Holmes (1971), Walthall (1980), Curren (1976), Knight (1977, 1984), and Knight and Adams (1981) in addition to Brose *et al.* (1983).

Historic site investigations near the study area include the work of Harris (1970) at Fort Louis de la Mobile (1Mb94), Fort Conde (Harris and Nielsen 1972), Fort Mims (Stowe and Hoyt 1975), Fort Stoddard (Stowe 1975; Stowe and Jenkins 1980), and the Blakeley shell midden, 1Ba229 (Stowe 1977). At this latter site, extensive aboriginal shell middens, the early 19th century town of Blakeley, and a Civil War battlefield are present.

Civil War period sites are common in the vicinity of the project area, and a number have been investigated. Trenches and

earthworks at Spanish Fort and Blakeley have been investigated (Stowe 1977; Curren 1980). Stowe (1981) has examined Confederate fortifications on the Blakeley River called Battery Tracey (Weisman and Brose 1983). Other remnants of Confederate earthworks which were constructed to defend Mobile have been severely impacted by urbanization; however, intact portions remain but are untested (Weisman and Brose 1983).

Finally, Waselkov (1991) has recently reported on excavations at the French site of Old Mobile, north of present-day Mobile, where he has been successful in finding roads and buildings along with numerous artifacts associated with its founding.

# CHAPTER IV
# PREHISTORY AND HISTORY OF THE MOBILE-TENSAW DELTA REGION

## INTRODUCTION

This chapter is concerned with one primary research objective: to provide a concise review of the archaeology and history of the Mobile-Tensaw Delta region. This, along with the data presented in the previous chapter on geomorphology and in the following chapter on results of the field reconnaissance, will serve as the basis for a general research design and predictive model of human settlement for the project area. This model will be presented following the results chapter and will serve to guide the development of subsequent research designs for particular sites. The literature review and archival research described in the preceding chapter have provided the data from which the present overview of the prehistory and history is constructed.

The Mobile-Tensaw Delta region has been important to archaeologists for most of the 20th century. As noted in the previous chapter, research began as early as the turn of the century and has continued into the present. For example, the surveys of Curren and Stowe (1971) and Stowe (1981) have provided the bulk of site data for the delta. Syntheses of archaeological and ethnohistoric data for the Mobile Bay/Delta region have been provided by DeJarnette (1952), Curren (1976), Knight (1977, 1984), Knight and Adams (1981), Jenkins (1983), Lankford (1983), Fuller (1990), Stowe (1977, 1990), and Walthall (1980). Futato (1989) has summarized data on the lower Tombigbee Basin just north of the project area. New World Research, Inc. (1988) has recently provided an archaeological overview of the Southern Pine Hills zone immediately to the west of the delta.

The most comprehensive report produced to date in the delta region is that of Brose *et al.* (1983) in conjunction with the Black Warrior-Tombigbee System Corridor study. The following discussion of the culture history is summarized primarily from the above sources, although others were also consulted as deemed appropriate. Since Archaic sites are rare in the delta, data from nearby areas are used to infer Archaic settlement patterns and subsistence practices which may be applicable to the study area.

### Paleoindian Period

Very little is known of the Paleoindian Period (12,000 B.P.-10,000 B.P.) within the Mobile-Tensaw Delta. Occasional fluted points such as Clovis are found in the lower Tombigbee drainage to the north of the project area (Futato 1989). No data are presently available to suggest what Paleoindian settlement or subsistence patterns are like in the area. Fluted points have been found on

terraces bordering the central Tombigbee River, as have Dalton and Big Sandy points (Ensor 1982, 1985). It seems likely that Paleoindian sites in this area are represented by small lithic scatters resulting from brief encampments by small bands (Ensor 1982; Futato 1989). Due to the lower sea level at the end of the Pleistocene, areas which were inhabitable then by Paleoindian groups are likely buried offshore, or at best, eroding from the shoreline of the Gulf of Mexico (Gagliano 1984).

## Early Archaic Period

The Early Archaic Period (10,000 B.P.-8000 B.P.) in the lower Tombigbee River drainage is also poorly known. No early Archaic sites have been intensively excavated until very recently. Data that we have concerning early Archaic chronology, subsistence, and settlement patterning come from the central Tombigbee and Alabama Rivers. Recent work by the University of South Alabama at a Dalton/Big Sandy site north of Mobile promises to provide much-needed information concerning this time period (Read Stowe, personal communication 1992).

Data for the Late Paleoindian to Early Archaic time periods are also available from the Florida panhandle area to the east. In the area around Choctawhatchee Bay, these time periods are represented by such point types as Bolen, Suwannee, and Santa Fe (Thomas and Campbell 1990). Sites dating to this time period are found at many different interior locations at Eglin Air Force Base. Many coastal sites are likely inundated by the Gulf of Mexico. Bense (1983) has indicated that sites associated with this time period are found in river valleys, on high ground overlooking tributaries, on bay divides, and on the peninsula. The present artifact data indicate that Late Paleoindian/Early Archaic groups were small and highly mobile and scheduled their movement according to seasonal shifts in the availability of game animals and other resources (Thomas and Campbell 1990).

Three main Early Archaic Period projectile point horizons are present within the lower and central Tombigbee basin as well as the Mobile-Tensaw Delta region. These include the Dalton, Big Sandy, and Kirk Corner Notched horizons (Chase 1966; Ensor 1981, 1982; Futato 1989). Early Archaic peoples are thought to have been organized into small, highly mobile bands which moved according to seasonal shifts in resource availability and abundance on the Gulf Coastal Plain (cf. Thomas and Campbell 1990; Ensor 1982; Anderson and Hanson 1988). White-tailed deer and hickory nuts make up a sizable amount of foodstuffs known to have been utilized by Early Archaic peoples in the central Tombigbee and Alabama drainages (Futato 1989).

It is expected that Early Archaic sites in the lower Tombigbee drainage and the Mobile-Tensaw Delta region will be small, limited

activity camps for the most part, although the presence of longer-term settlements cannot be ruled out. These sites should also be deeply buried except for upland lithic scatters. Brose *et al.* (1983:29) indicate that due to delta formation during the period 9500 B.P. until 5500 B.P., archaeological sites should be no farther south than the extreme southern end of the delta swamp zone. The results of that reconnaissance showed that Early Archaic sites were most consistently predicted at the edge of the delta on terraces or bluffs.

New World Research, Inc. (1988) has recently recorded Early Archaic Dalton-Big Sandy sites north of the delta. They indicate that these sites probably represent short-term encampments with the settlement pattern characterized by seasonal movements within a restricted "core" area which they refer to as "restricted wandering." No base camps were found, but the authors indicate that procurement of Tallahatta quartzite (Dunning 1964) was a common practice.

## Middle Archaic Period

The Middle Archaic Period (8000 B.P.-5000 B.P.) in the lower Tombigbee and central Alabama River drainages is recognized on the basis of a distinctive projectile point horizon described by Ensor (1982) as being part of the Coastal Plain Archaic tradition. Points with short, broad haft elements formed by small corner removals or broad, shallow side notches predominate Middle Archaic assemblages (Futato 1989). Point types such as Vaughn, Demopolis, Sykes/White Springs, Morrow Mountain, and possibly Cypress Creek occur.

North of the delta, New World Research, Inc. (1988) found that Middle Archaic sites were most often located in close proximity to outcrops of Tallahatta quartzite. However, to the west of the delta in the Southern Pine Hills, Middle Archaic site frequency was low. Overall, the authors state that Middle Archaic site location was similar to that of Early Archaic people. As pointed out above, Archaic site locations near the delta were strongly associated with bluffs and terraces at the edge of the delta floodplain (Brose 1983).

In the lower Tombigbee Basin, it is believed that Middle Archaic sites are larger and more numerous than earlier sites, apparently reflecting an increased population density and degree of sedentism (Brose *et al.* 1983; New World Research, Inc. 1988; Futato 1989). Riverine base camps possessing middens and smaller upland base camps are thought to be parts of Middle Archaic settlement in the lower Tombigbee area (Futato 1989). Tallahatta quartzite, a local material suited to stone tool manufacture (Dunning 1964; Ensor 1981, 1982; Curren 1982; Lloyd *et al.* 1983), was extensively quarried and traded northward into the central Tombigbee Valley,

primarily in the form of bifacial cores or "preforms" (Curren 1982; Ensor 1982; New World Research, Inc., 1988; Futato 1989). Quarry sites are expected to be numerous in areas where good quality Tallahatta quartzite is exposed.

Middle-Late Archaic Period sites to the east of the Mobile-Tensaw Delta region are poorly represented. Again, where they exist at all, they are most likely very deeply buried and undetectable using conventional survey methods. Most of the diagnostics found have been isolated finds. However, some evidence exists for a shift in settlement following the Early Archaic Period. Middle-Late Archaic sites are commonly found in coastal settings in the Fort Walton area to the east, and unlike Early Archaic sites, do not, as a rule, occur in major interior river settings (Thomas and Campbell 1990). This shift has been attributed at least partially to environmental changes brought on by the Hypsithermal, which Thomas and Campbell (1990) indicate may have resulted in less interior territory suitable for exploitation during the Middle Archaic. Whether this pattern can be projected as far west as the Mobile-Tensaw Delta is unknown. New World Research, Inc. (1988) has noted an apparent shift in Middle Archaic occupation northward into the Burhstone Hills from the Southern Pine Hills.

### Late Archaic Period

Following the Middle Archaic, the next period recognized in the Mobile-Tensaw Delta is the Late Archaic Period (Chase 1972; Weisman and Brose 1983; Stowe 1977; Futato 1989). This time period begins at 5000 B.P. and extends until approximately 3000 B.P. This is the last of the pre-ceramic periods in the study area and is usually recognized on the basis of a variety of projectile point types such as Little Bear Creek, Gary, Pickwick, and Ledbetter, among others (Futato 1989).

Late Archaic cultural adaptation appears to be similar to earlier Middle Archaic adaptations, but with differences such as the proliferation of projectile point forms. Riverine base camps and small upland lithic scatters are again predicted for this time period, along with increased regionalization and trade (Futato 1989). Quarry sites are also expected wherever good quality Tallahatta quartzite outcrops occur. Subsistence practices among Late Archaic populations in the lower Tombigbee Basin are thought to have focused on white-tailed deer and other game as well as hickory nuts and acorns (Futato 1989).

New World Research, Inc. (1988) has detected an apparent shift in Late Archaic settlement northward on the Tombigbee River into the broad floodplains of the Southern Red Hills and Limestone Hills during this period. This shift may have begun during the Middle Archaic. However, it is not known if this represents an overall population movement out of the Mobile-Tensaw Delta region. Stowe

(1990) has commented on the dearth of Archaic sites in general in the Mobile-Tensaw Delta. This is probably due in large part to the deeply buried nature of sites in the delta region. Seasonal exploitation of upland and floodplain resources was postulated. Brose (1983) has stated that Archaic sites are most often found at the edge of the delta floodplain on bluffs or terraces.

### Middle Gulf Formational Period

The Middle Gulf Formational Period (3000 B.P.-2500 B.P.) is represented in the study area by the presence of fiber tempered Norwood/Wheeler variant ceramics (Jenkins 1983; Stowe 1990; Fuller 1990). Associated projectile point types include Flint Creek, Little Bear Creek, and Wade cluster types (Ensor 1981; Futato 1989). Stowe (1990) indicates that "a few biconical and tetrahedron Poverty Point-like objects" have been found in southwest Alabama and northwest Florida, but that for all practical purposes, Poverty Point sites do not occur in those areas. Very few sites producing fiber tempered pottery have been recorded for the Mobile-Tensaw Delta, so not much is presently known regarding settlement and subsistence patterns.

Just north of the project area, New World Research, Inc. (1988) located Middle Gulf Formational sites which were distributed similarly to their Late Archaic counterparts. The authors suggest a seasonal settlement pattern which shifted between the floodplain and the upland areas.

To the north, Wheeler variant subsistence practices in the central Tombigbee Valley appear to revolve around the procurement of white-tailed deer and hickory nuts (Jenkins 1982). The same basic settlement and subsistence pattern inferred for the Late Archaic is thought to characterize the Wheeler variant pattern (Futato 1989). A seasonal dichotomy of floodplain base camps and special extractive camps is thought to be present.

The Elliotts Point or Gulf Formational Period of cultural development farther east of the Mobile-Tensaw Delta is substantial. This culture was adapted primarily to coastal or littoral resources (principally oyster), and camp sites are commonly clustered in the vicinity of shell mounds. Sites are also located in interior settings. Fiber tempered pottery of the Norwood series along with baked clay objects, steatite vessels, and microliths are associated with the Elliotts Point Phase. Elliotts Point people appear to have participated in an inter-regional trade network which was centered in the Lower Mississippi Valley at Poverty Point (Thomas and Campbell 1990:596).

The few Middle Gulf Formational sites known for the delta region tend to occur on well-drained soils on the sand banks and levees along major distributaries (Brose 1983).

## Late Gulf Formational Period

The Late Gulf Formational Period is represented in the study area by two cultures - the Alexander and Bayou La Batre variants (Jenkins 1983; Futato 1989; Fuller 1990; Stowe 1990). Alexander sites occur with some frequency along the lower Tombigbee and southwestern Alabama area, while Bayou La Batre occupations also occur frequently (New World Research, Inc. 1988). Alexander components are not common in the delta region. Farther north, Alexander pottery and Flint Creek projectile points are believed to date between 2500 B.P. and 2100 B.P. (Jenkins 1982).

The Bayou La Batre component at site 1Ck45 on the lower Tombigbee River has been dated to 2195 B.P. (Weisman 1983), while Trickey and Holmes (1971) have dated this culture to 3400 B.P. at the Bryant's Landing site in Baldwin County. However, this date is believed to be as much as 500-800 years too old (Fuller 1990). Jenkins (1983) provides a terminal date of 1900 B.P. for Bayou La Batre, which Fuller (1990) says begins by 2500 B.P. Data indicate that the Bayou La Batre settlement-subsistence pattern may have involved a seasonal dichotomy, with coastal sites occupied during warmer months and inland sites during cooler months (Futato 1989).

Jenkins (1983) has commented on the nature of the Bayou La Batre assemblage at site 1Mb229A in the delta marsh zone which was excavated by Stowe (1977). A Bayou La Batre zone there was comprised of both Bayou La Batre *Stamped* and Bayou La Batre Plain, both grit or sand and grit tempered. Jenkins sees a continuum between late Bayou La Batre and early Porter assemblages (see below), with many of the same decorative treatments in Porter having their origin in Bayou La Batre. Walthall and Jenkins (1976) indicate that Bayou La Batre, Tchefuncte, and Alexander should all be roughly contemporaneous. Wimberly (1960) found Tchefuncte sherds in direct association with Bayou La Batre ceramics at site 1Mb14.

Brose (1983:189) indicates that Bayou La Batre sites are most often found on "well-drained floodplain basin soils on sand banks and levees along major distributaries." He further indicates that they are away from secondary distributaries, bays, or basins.

## Middle Woodland Period

The Middle Woodland Period in the project area is represented by a distinctive ceramic tradition known as the Porter culture. The Porter culture dates from approximately 2100 B.P. until 1600 B.P. (Jenkins 1983; Fuller 1990). Porter culture is identified on the basis of sand tempered incised and punctated ceramics. The Porter culture practiced mound burial and participated to some degree in the "Hopewellian Sphere of Interaction" (DeJarnette 1952; Wimberly 1960).

The Middle Woodland Period Santa Rosa and Porter cultures occur within the study area (Jenkins 1983; Fuller 1990). The early portion of the Santa Rosa culture dates between 2200 B.P. and 1850 B.P., while the later Porter culture dates from 1850 B.P. until 1600 B.P. Fuller (1990:4) has described the earlier Blakeley Phase of the Santa Rosa culture, which he says developed out of the Bayou La Batre variant Bryant's Landing Phase. This phase is recognized on the basis of a sand tempered stamped ware, including sherds resembling Lower Mississippi Valley types such as Mabin Stamped *var. Crooks* and Indian Bay Stamped (Fuller 1990). Minor amounts of exotic carved paddle stamped ceramics also occur, such as Deptford and Swift Creek. Jenkins (1983:146-147) indicates that an early Porter Phase component was excavated at site 1Ba229A which appears to have developed out of the Bayou La Batre component as noted above. Fuller (1990) refers to this as the Blakely Phase of the Santa Rosa culture. Porter Phase subsistence and settlement patterns are believed to revolve around seasonal coastal or estuarine shell middens and inland base camps situated in river valleys (Futato 1989).

Jenkins (1983) prefers to refer to the local Middle Woodland culture simply as Porter, wishing to emphasize its local development. Early Porter ceramics consisted of 80-85 percent plain grog and sand tempered pottery, and Jenkins infers a direct development from the preceding Bayou La Batre variant. Minor amounts of Bayou La Batre Stamped, Bayou La Batre Scallop Impressed, Santa Rosa Stamped, and other types were also present. Basin Bayou Incised evidently increases through time from early to late Porter (Jenkins 1983:148). Fuller (1990) has described a later version of Santa Rosa culture, known locally as the Porter Phase, which succeeds the Blakely Phase. Zoned rocker stamping, punctating, and incising prevail during this phase, as does a refinement in paste tempering agents (Fuller 1990). Basin Bayou Incised increases in frequency during this time.

Shortly after 1600 B.P., there is a transition from Porter to Weeden Island in the southern Mobile Basin (Fuller 1990), with ceramics related to Troyville in the Lower Mississippi Valley predominating. To date, this material has been included within the early portion of the local Weeden Island manifestation - the Tate's Hammock Phase (Walthall 1980; Jenkins 1983; Fuller 1990). In the northern portion of the basin, plain fine-sand tempered ware predominates for a short period. Fuller (1990) indicates that this "plainware tradition" may be related to some of the early Baytown variant phases and Deasonville. Fuller (1990) indicates that this complex initiates a separation of ceramic traditions which become even more pronounced with the passage of time.

Middle Woodland sites are most often found in the delta along distributaries or the active river on well-drained soils near bays or basins (Brose 1983).

## Late Woodland Period

Following the Middle Woodland Period, the Late Woodland Period in the Mobile-Tensaw Delta is recognized by the presence of several distinct phases (Jenkins 1983; Fuller 1990). The Miller III Phase occurs primarily to the north of the study area (Jenkins 1982; Futato 1989) but also to the west of the delta (New World Research, Inc. 1988).

The Late Woodland Period is marked by an increasingly complex cultural setting in which the Mobile-Tensaw/Mobile Basin is home to various ceramic traditions and archaeological cultures (Fuller 1990). The Tate's Hammock Phase, mentioned above, is a local Weeden Island culture which had its origin in the earlier Porter Phase. It is thought to date between 1600 B.P. and 900 B.P. (Jenkins 1983). Fuller (1990) limits the Tate's Hammock Phase to between 1600 B.P. and 1250 B.P. in the southern Mobile Basin as mentioned above. Coles Creek (Phillips 1970) decorative elements become in vogue, as do a variety of others including Carabelle Incised, Carabelle Punctated, and Mazique Incised (Jenkins 1983; Fuller 1990). However, during early Weeden Island, sand tempered plain pottery comprises 80-90 percent of the ceramic assemblage, with the remainder consisting of check stamping and the other minority types mentioned above (Jenkins 1983:149). Other minority types associated with early and late Weeden Island include Baytown Plain, Coles Creek Incised, and Mulberry Creek Cord Marked. Jenkins (1983) indicates that a large number of Weeden Island components are found in the delta.

Fuller (1990) has described the Powell Mound Phase, a late Weeden Island manifestation recognized on the basis of increased frequency of Wakulla Check Stamped and a late variety of St. Petersburg Incised. He dates this phase between 1250 B.P. and 900 B.P.

Beginning around 1150 B.P.in the delta, a distinctive Late Woodland complex known as Tensaw Lake has been defined (Jenkins 1983:152). A very coarse sand-grit tempered cord marked type known as West Florida Cord Marked or Mobile Cord Marked predominates the ceramic assemblage, with minority types such as check stamping and simple stamping (Jenkins 1983; Fuller 1990). This complex appears largely restricted to the delta.

Late Woodland sites in the delta tend to occur on "well-drained soils adjacent to the active river or major distributaries near bays or basins" (Brose 1983:192).

Just to the north of the delta, another Late Woodland phase known as McLeod has been described by Fuller (1990). It is recognized on the basis of a fine textured, sand tempered McLeod Check Stamped and McLeod Simple Stamped pottery (Jenkins 1983). It is partially contemporaneous with the Tensaw Lake Phase and dates

from 1500 B.P. to 900 B.P. or maybe later. McLeod is believed to have developed out of central and east-central Alabama Deptford-related culture (Jenkins 1983).

## Mississippian Period

Mississippian culture in the Mobile-Tensaw Delta dates from 850 B.P. to 450 B.P. and is represented by a distinctive set of Bottle Creek-related cultural phases within the Pensacola series (Fuller 1990). The large Mississippian multiple mound center at Bottle Creek represents a regional ceremonial center (DeJarnette 1952; Curren 1976; Walthall 1980; Jenkins 1983). Ceramic types of the Pensacola variant within the Mobile-Tensaw Delta region include Pensacola Incised, Mound Place Incised, Moundville Incised, Carthage Incised, Pensacola Red, and Mississippi Plain (Fuller and Stowe 1982; Jenkins 1983). Fuller (1990) has subdivided the Pensacola variant into two main phases: Bottle Creek I and Bottle Creek II. The earliest, Bottle Creek I, dates from 750 B.P. to 600 B.P., and is followed by Bottle Creek II, from 600 B.P. to 450 B.P. These two phases are preceded by what Fuller (1990) refers to as a Moundville I-like complex which is undefined but is believed to date from 900 B.P. to 750 B.P.

The settlement pattern associated with the Bottle Creek I and II Phases includes both small farmsteads located in the river valleys and delta, as well as large villages on higher ground in the upper delta and at the edge of river valleys (Curren 1976; Brose *et al.* 1983; Knight and Adams 1981; Knight 1984; Fuller 1990). Specialized salt production sites are found within the Bottle Creek settlement pattern (Stowe 1989). Brose (1983:193) suggests that within the delta two types of Mississippian sites occur. He describes these as "large linear...shell middens" and large permanent villages associated with one or more mounds with evidence of cemeteries.

Brose (1983) indicates that the large shell middens are commonly found on well-drained soils associated with overbank splays and levees along the major distributaries and near bays in the delta swamp and delta marsh zones. He further states that this site type occurs "at almost every junction of a major distributary," even though they are not usually found "within 500 meters of major secondary distributary junctions" (Brose 1983:194). Stowe (1978) has documented the occurrence of this site type on islands in the lower delta marsh zone.

Short-term, small, seasonal "farmsteads" are thought to occur with regularity in the Mobile-Tensaw Delta (Knight 1984) based on ethnohistoric accounts of Mobile-Tomeh subsistence pursuits. Crops which were grown include maize, beans, squash, and watermelon (Knight and Adams 1981). Curren (1976) has stated that larger shell middens in the delta served as base camps from which a

variety of activities were carried out. He also indicates that small seasonal "shell gathering" stations, which appear to have been occupied for shorter periods, occur throughout the delta and bay regions. This pattern of large and small shell middens has been interpreted by Knight (1984:213) as evidence of "seasonal dispersal and reaggregation."

## Protohistoric Period

The protohistoric period in the study area is dominated by the Bear Point Phase which is probably related to the central Alabama "Burial Urn" culture (Alabama River Phase) (Cottier 1968). Bear Point Phase ceramics are similar to those of the Alabama River Phase to the north, implying that they may be related. The Bear Point Phase dates from 450 B.P. to 350 B.P. (Fuller 1990). This protohistoric phase is centered in the Mobile Bay and delta area, and its upper limits fall within the Southern Pine Hills of the lower Tombigbee drainage (Futato 1989). This phase is recognized primarily on the basis of distinctive shell tempered pottery such as Mississippi Plain *var. Pine Log* (Fuller and Stowe 1982) and Mississippi Plain *var. Guillory*.

Protohistoric settlements within the delta show a marked change from the preceding Pensacola/Bottle Creek pattern (Brose 1983). Over 90 percent of the protohistoric sites documented in the Black-Warrior-Tombigbee System Corridor study were in the delta (Brose *et al.* 1983). However, these sites were most often found in the delta floodplain near old bays and connecting waterways on levees and in the uplands along bluff edges.

## Historic Period

In his volume on delta ethnohistory, Lankford (1983) placed the locations of several Native American towns at, or close to, the present assessment area. The following summary is based on his research.

In 1706, the Tawasa were present at Twenty-One Mile Bluff (Lankford 1983:48; 50-51) which is now at the Interstate 65 bridge over the delta. The Tawasa town was attacked by Apalachicolas and Creeks in 1706 or 1707, and the population was killed or scattered. Some survivors settled at Liveoak Landing on Bayou Sara. In 1715, Bienville brought a group of Natchez-speaking Taensa refugees from the Mississippi River and settled them at Twenty-One Mile Bluff. They later moved to the Stiggins Lake area where they lived until they died out or moved to Louisiana with the French departure in 1763-64 (Lankford 1983:53;57). The earlier inhabitants of the upper delta (pre-1706) were the Mauvila, Tomeh, and Naniaba; the Pensacola occupied a site at the mouth of the Blakeley River near D'Olive Creek (Lankford 1983:13;32).

As a result of the English destruction of the Spanish Apalachee missions in west and north Florida in 1704, 400 Apalachee and 200 Chato came into the delta, welcomed by the French. The Chato were settled at Choctaw (Chato) Point at the mouth of the Mobile River, but later moved to Dog River. About half the Apalachee occupied the site on the Tensaw River which later became old Blakeley town. The other half of the Apalachee went to an area south of present Mount Vernon along Cedar Creek (Lankford 1983:47). By 1715, another Apalachee settlement was located at the mouth of Chicksabogue where International Paper Company now stands (Lankford 1983:52).

In 1763-64, nearly all the French departed, in agreement with a truce settlement between the European powers. The remaining Indians, their numbers greatly reduced by diseases over six decades, moved with the French westward to Louisiana, leaving the delta to the British. The first to leave were the Apalachee, Taensa, and Mauvila, followed by the Tawasa, and finally by the Naniaba and Tomeh in 1770. The Chato are believed to have mixed with the Choctaw, or to have moved west. The British took up the abandoned lands; a few families of the French gave allegiance to the British crown and remained.

The earliest European exploration of the Mobile-Tensaw Delta region was by the Spanish in the 16th and 17th centuries. French settlement began in earnest with the establishment of Fort Louis at Twenty-Seven Mile Bluff to the west of the delta in 1702. The settlement was moved in 1711 to the present day location of Mobile. French Fort Conde was built there, and they remained in control until they ceded it to the British in 1763. The active colonial, Civil War, and post-bellum history of the Mobile-Tensaw Delta region has resulted in the presence of numerous historic sites. According to Stowe (1981:2), historic site types which occur in the delta include "French, Spanish, Early American, and Civil War fortifications" as well as submerged shipwrecks dating to the colonial, Early American, and Civil War periods.

The legacy of European occupation of the delta is mainly that of land survey lines of properties of the colonial and early American period and of scattered occupation sites. According to Weaver (1983:30-39), fewer than fifty French settlers were engaged in agriculture at 1763; clearly, this was not a major activity. Furs, hides, and timber products appear to have been the primary interests of the French colony. In contrast, the British promoted farming, and a relatively large number of grants were taken in the upper delta around Tensaw Lake, Mobile River, the lower Tombigbee and the lower Alabama River.

As in the French occupation, the British included properties along the low terraces and some acreage on the floodplain and delta. Livestock, indigo, naval stores, cotton, and food crops were cultivated on the uplands, and rice was cultivated, rather

unsuccessfully, on the wetlands. Leading exports during the 1770s included indigo and hides (probably deer hides), timber, lumber, wild nuts, tobacco, tar and pitch, and various food products. Some exports were destined overseas and some for the coastal towns (Weaver 1983:30-39).

In the American occupation beginning in 1811, the major use of the delta and floodplain was timber harvesting. Farming and livestock raising have been very limited; recreation a. logging are the primary modern uses.

## CHAPTER V
## RESULTS OF FIELD RECONNAISSANCE

### Field Reconnaissance

Based on the information obtained in the literature review/archival search described in Chapter 3, a list of sites was selected to be relocated and evaluated. A total of seven prehistoric/historic sites were determined to have been previously recorded in the project area. These include prehistoric sites 1Mb97 (Live Oak Landing), 1Ba192, 1Ba200, 1 Ba15, 1Ba289, 1Ba191, and 1Ba198. Selection of sites to be revisited was fairly straightforward, since so few sites had been previously recorded. However, data from site forms pertaining to each site were compared to prioritize attempts at relocating sites. Extensive, largely intact shell middens which had exhibited only minimal disturbance were selected to be visited first. However, an attempt was made to revisit every previously recorded site in the project area.

An additional ten sites were located very close to the study area, including site 1Ba170, which appears to be located just outside the project boundary on the west bank of Raft River.

Field reconnaissance began on July 5, 1992 and was completed on July 10, 1992; a total of ten person days were expended in the effort. Reconnaissance was conducted primarily by boat with limited pedestrian survey. Limited shovel testing was conducted at sites to aid in defining site limits and to determine internal site stratification and integrity. Additional shovel testing was conducted in high probability areas such as elevated landforms or where informant information indicated that sites could be present. Shovel test forms were completed for all shovel tests, and all soil was screened through ¼ inch hardware cloth to insure comparability of recovered samples. All sites were photographed, and daily field notes describing each day's activities were kept, including a detailed record of each site visit. Interviews with local informants resulted in additional data concerning site locations in the delta.

The following sites were relocated and assessed. Site 1Mb97 (Live Oak Landing), 1Ba289, 1Ba200, and 1Ba215. Each of these sites except 1Ba215 was shovel tested, and surface collections were made. Site 1Ba215 was surface collected only since the water table was at the surface of the site. Unsuccessful attempts were made to relocate previously recorded sites 1Ba191, 1Ba192, and 1Ba198. A single new site was recorded during the reconnaissance on Bayou Sara (1Mb129).

During the course of fieldwork, a large portion of the shoreline in the project area was visually examined. This included long segments of Bayou Sara, Big and Little Bayou Canot, the Mobile and Tensaw Rivers, Briar Creek, Williams Creek, Gravine Island,

Sand Bayou, and Oakleaf Bayou. Several localities were observed during the boat survey where *Rangia* clams were exposed along the shoreline. In one instance, a new site was discovered; however, the other localities appeared to be the location of recent clam beds or dredging activities, since no artifacts were found.

It should be noted that survey of the distributary channel and other tributary channel shorelines is most productive at low tide, because the sites are just barely above the water table. Therefore, even minor sea level fluctuations can determine if a site is located or missed. The shell middens which occur frequently in the study area are best seen during particular parts of the day, depending upon their location and the position of the sun. These factors should be taken into account when contemplating additional survey work in this portion of the delta.

The following section provides a brief description and summary of each site revisited or newly recorded. A relatively large ceramic sample was recovered from the sites. These, along with other material remains from the sites, are quantified by type or category and are included with each site description. Additionally, a representative sample of the diagnostic ceramics is illustrated for each site which yielded such pottery. Historic artifacts are summarized in tabular form in Appendix II.

**Site 1Mb97 (Live Oak Landing)**

The Live Oak Landing site (1Mb97) is located on the east bank of Bayou Sara approximately .5 miles southwest of where Little Catfish Bayou enters Bayou Sara (Figure 3). A hunting cabin rests on top of the site, and the edge of the site along Bayou Sara is actively eroding (Figure 4). *Rangia* clam and pottery sherds are distributed all along the eroding shoreline. A representative profile along Bayou Sara is shown in Figure 5. Site size is estimated to be approximately 70 m long and 40 m wide. An extension of 1Mb97 called 1Mb97-A was designated for a topographic rise containing artifacts some 20 m east of 1Mb97 proper.

This site was revisited twice during the course of fieldwork. A total of three shovel tests were excavated along the top of the site. A single dark brown organically enriched midden containing numerous *Rangia* clams and pottery sherds was present in Shovel Tests 1 and 3. An accumulation of brick was encountered just beneath the surface in Shovel Test 2, so it was abandoned. Midden thickness averaged about 50 cm thick. A historic component(s) was noted at the site based on both a surface collection and materials from the shovel tests. A single human skeletal bone fragment was recovered from level 1 of Shovel Test 3.

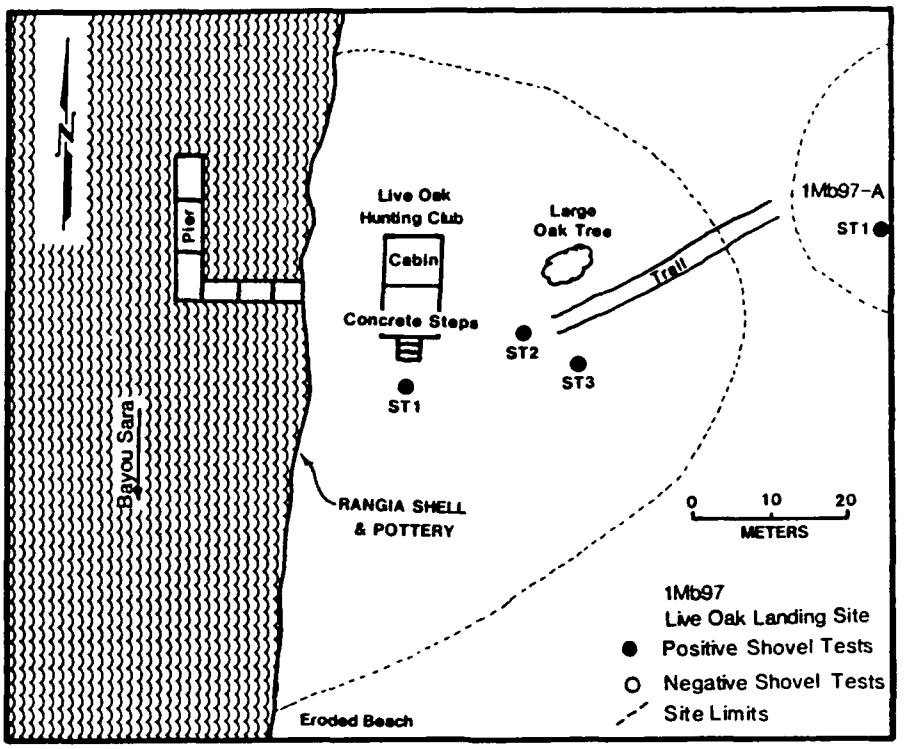


Figure 3. 1Mb97, Site Plan.

Previous analysis of artifacts from the site indicates that prehistoric occupation occurred as early as the Late Gulf Formational Period and extended through the Mississippian Period (Stowe 1981). Historic component(s) dating from the 18th through 20th centuries were reported from previous work at the site. The recovery of brick in Shovel Test 2 and the presence of historic period ceramics in the surface collection verify this historic 2qoccupation. Appendix II inventories the historic artifacts from this site.

Results of the ceramic analysis from the surface collection and shovel tests indicate that the site appears to have been successively occupied over a long period of time beginning around 2500 years ago. Diagnostic ceramics recognized include Bayou La Batre Scallop Impressed, Bayou La Batre Stamped, Weeden Island Plain, and Pensacola Incised (Figure 6). A ceramic pottery disc found at the site has a paste very similar to those at the Bottle Creek site north of the project area. Large quantities of plain grog-clay tempered ceramics were also found, some of which have pastes similar to Tchefuncte Plain of the Lower Mississippi Valley. Analysis of these ceramics indicates that the majority are probably associated with an early Porter Phase component (Ned Jenkins, personal communication 1992). Lithic remains are scarce, and no temporally diagnostic lithic specimens were recovered which would indicate that a preceramic component was present.

Figure 4. Eroding Shoreline at the Live Oak Landing Site (1Mb97).

Figure 5. Representative Profile Along Bayou Sara, 1Mb97.

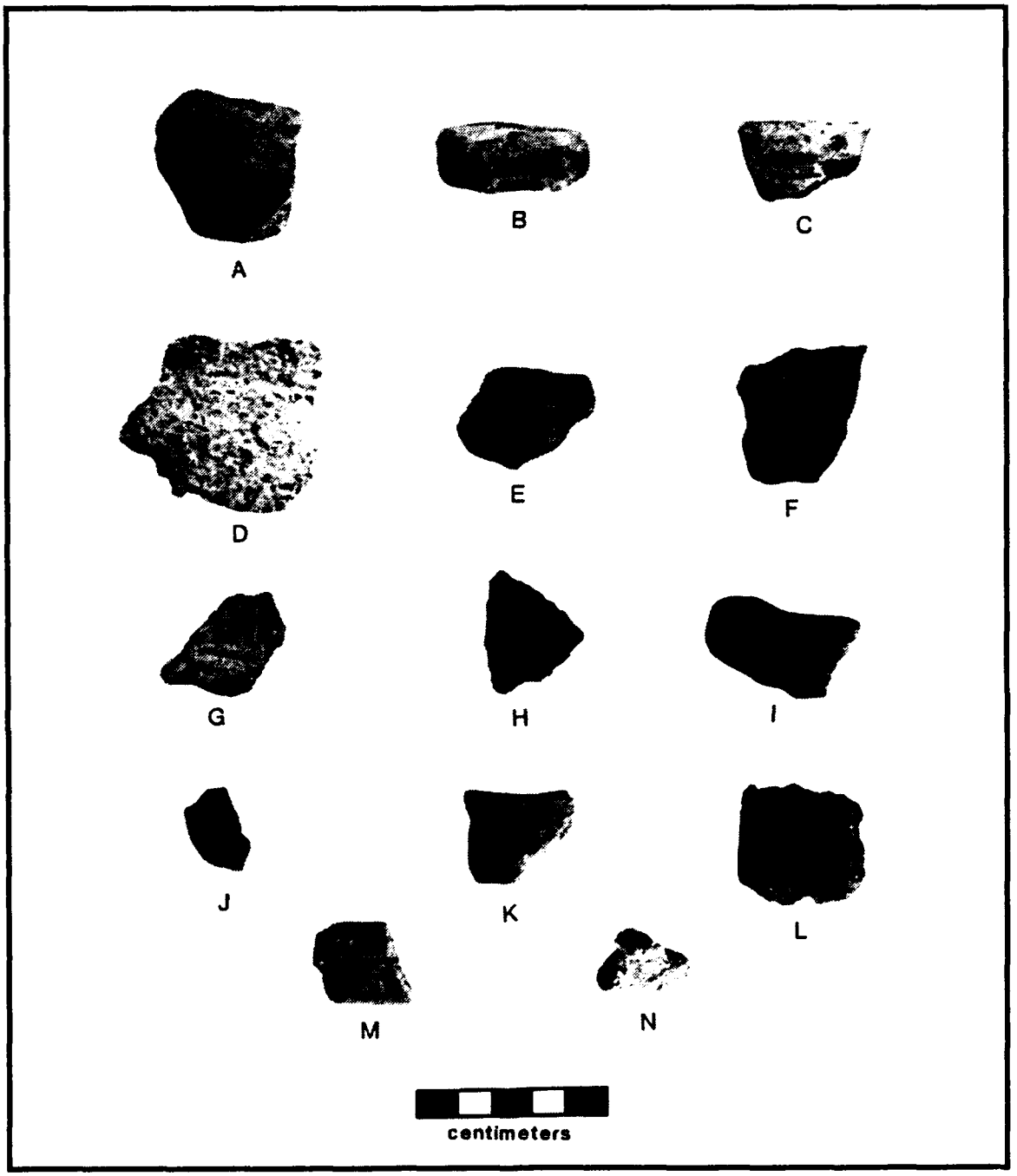


Figure 6. Ceramics from Site 1Mb97. A, Baytown Plain rim; B, Weeden Island Incised rim; C, shell tempered Incised rim; D, Mississippi Plain var. Guillory rim; E, Baytown Plain rim; F, Carabelle Punctated; G, Pensacola Incised var. Bear Point body sherd; H, Bayou La Batre Stamped; I, Mobile Cord Marked body sherd; J, Pensacola Incised body sherd; K, Bayou La Batre Stamped; L, coarse sand-grit tempered Incised; M, Pensacola Incised body sherd. 1Mb97-A. N, Mississippi Plain rim.

Analysis of the site collections along with observed structural integrity of the site area indicates that it is potentially eligible to the National Register. Components recognized include historic, Mississippian, Tensaw Lake, Weeden Island, Porter, and Bayou La Batre. The site may provide good stratigraphic data regarding components over virtually the entire time period in the delta that ceramics were being produced. Data on subsistence practices are available, as the calcium-rich soil has preserved faunal remains. The presence of the human skeletal element may indicate that burials are present. The artifact sample from the shovel tests is too small to make definitive judgements regarding site stratification and integrity; however, data indicate that the potential exists for a relative, stratified sequence beginning with the Bayou La Batre culture and extending into the Mississippian stage. The Mississippian component is most likely related to the Pensacola variant, and the occupants may have participated in a settlement system which included the Bottle Creek site.

Final determination of site significance should involve controlled site testing. While a substantial portion of the site is still intact, erosion is presently taking place along the eastern edge.

## Materials Recovered

**1Mb97 Surface Shoreline**

Ceramics

4 - Mississippi Plain body sherds
1 - West Florida Cord Marked body sherd
2 - Bayou La Batre Stamped body sherd
1 - course sand/grit tempered
21 - grog tempered body sherds
13 - sand tempered body sherds
1 - Pensacola Incised *var. Bear Point* body sherd
1 - Carabelle Punctate body sherd
1 - Weeden Island Incised rim sherd
2 - Pensacola Incised *var. unspec.* body sherd
2 - grog tempered plain rim sherd
1 - burned clay frag.

Lithics

4 - Fess frags.
1 - quartzite pebble

Shell and Bone

5 - unident.
1 - mammal bone fragment
1 - turtle plastron fragment

**1Mb97 Shovel Test 1 level 1 (0 - 20 cm)**

Ceramics

4 - Baytown Plain body sherds
10 - fired clay frags.
1 - shell tempered incised

Shell and Bone

4 - unburned *Rangia*
2 - bone frags.

**1Mb97 Shovel Test 1 level 2 (20 - 35 cm)**

Ceramics

1 - coarse sand/grit incised rim sherd
1 - Baytown Plain body sherd
4 - grog tempered sherdlets

Lithics

1 - concretion
1 - limonite frag.
2 - sandstone frag.

Shell and Bone

5 - unburned *Rangia*
2 - burned *Rangia*
3 - bone frags.

Charcoal

3 - wood charcoal frags.

**1Mb97 Shovel Test 1 level 3 (35 - 50 cm)**

Ceramics

2 - Baytown Plain body sherds
2 - grog sherdlets

Shell and Bone

2 - unburned *Rangia*
1 - burned bone frag.

Charcoal

3 - wood charcoal frags./nutshell

**1Mb97 Surface Collection (top of site)**

Ceramics

1 - Mississippi Plain rim sherd
1 - Mississippi Plain body sherd
4 - Baytown Plain body sherds

**1Mb97 Shovel Test 2 level 1 (0 - 10 cm)**

Historic

6 - brick frags.

Shell

1 - unburned *Rangia*

**1Mb97 Shovel Test 3 level 1 (0 - 20 cm)**

Ceramics

4 - Mississippi Plain body sherds
3 - shell tempered sherdlets
14 - Baytown Plain body sherds
4 - grog sherdlets
1 - Weeden Island Incised rim
1 - sand tempered incised and punctated
10 - fired clay frags.
1 - Baytown Plain rim sherd

Human Skeletal Remains

1 - medial phalanx, left hand

Lithics

1 - siliceous pebble
5 - sandstone frags.

Shell and Bone

4 - unburned *Rangia*
2 - burned *Rangia*
2 - bone frags.

**1Mb97 Shovel Test 3 level 2 (20 - 40 cm)**

Ceramics

1 - Baytown Plain body sherd
1 - grog tempered sherdlet
1 - sand tempered plain body sherd

Charcoal

6 - wood charcoal frags.

**1Mb97-A Shovel Test 1 level (0 -20 cm)**

Ceramics

5 - Mississippi Plain body sherds
2 - Mississippi Plain rim sherds
6 - shell tempered sherdlets
7 - grog tempered sherdlets

Shell and Bone

3 - unburned *Rangia*
1 - bone frag.

Lithics

2 - sandstone frags.

**1Mb97-A Shovel Test 1 level 2 (20 -40 cm)**

Ceramics

1 - grog tempered sherdlet
1 - Mississippi Plain body sherd
1 - Mississippi Plain rim sherd

Lithics

1 - thinning flake

Shell

11 - unburned *Rangia*
2 - burned *Rangia*

Charcoal

1 - wood charcoal frag.

## Site 1Mb129

A small *Rangia* midden was located by boat survey approximately 200 m south of 1Mb97 on the west bank of Bayou Sara in the project area (Figure 7). It has been assigned the state number 1Mb129. The intact midden measures 4-5 m long and 2-3 m wide and is 20 cm thick. A single shovel test produced *Rangia* clam, pottery, and animal bone.

Analysis of the ceramics indicates that both plain sand tempered and check stamped pottery sherds are present, indicating a probable Late Woodland (Weeden Island?) association. This site is actively eroding into Bayou Sara. It is unclear whether the midden observed is a remnant patch or the result of a limited stay where aborigines deposited the remains of a few meals over a short period of time. If the latter is the case, then the site could have some research potential, especially if it is a single component site as it appears. Therefore, additional assessment is recommended as outlined in Chapter 7.

**1Mb129 Surface**

Ceramics

2 - sand tempered check stamped body sherds
3 - sand tempered plain body sherds
3 - grog plain body sherds

Lithics

1 - Fess frag.

Shell and Bone

1 - deer metatarsal
12 - unident. bone frag.
1 - burned unident. bone frag.

4 - wood frags.

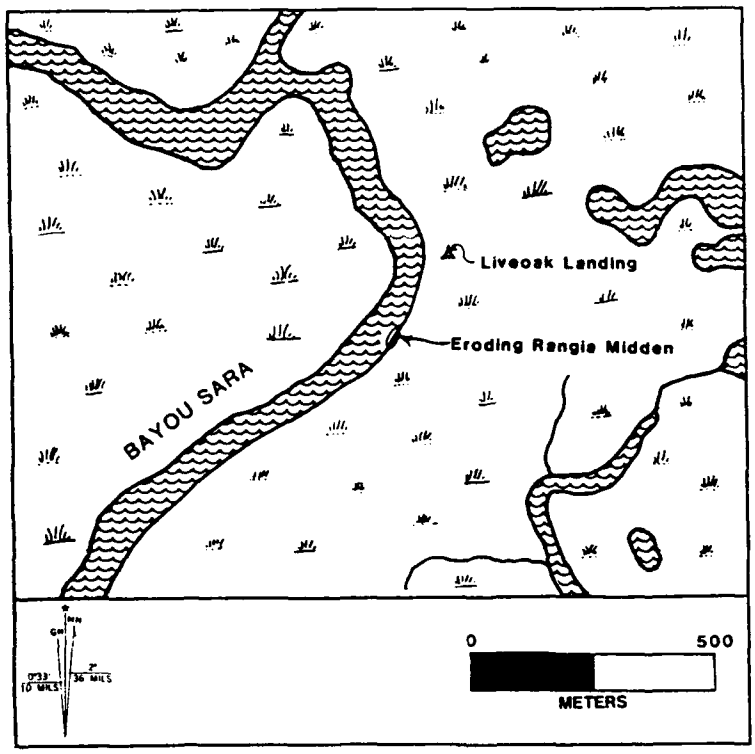


Figure 7. 1Mb129, Site Plan.

**Site 1Ba200**

This previously recorded site is located on the west bank of Oak Leaf Bayou where it joins Sand Bayou (Figure 8). The site consists of a compacted *Rangia* midden which is eroding along a 50 m (150 feet) bank exposure (Figure 9). The site width is approximately 30 m (100 feet). The remains of a hunting cabin cover a large portion of the site. A surface collection was made along the eroding shoreline.

A single shovel test was dug revealing a rich shell midden at least 60 cm thick. The water table was encountered at 60 cm below surface, but the *Rangia* clams extend to an unknown depth below it.

Ceramics from the shovel test and surface collection indicate a substantial prehistoric Pensacola variant Mississippian component related to Bottle Creek (Figure 11). Pastes from shell tempered plain sherds at the site encompass virtually the entire range in variation of Bottle Creek Phase Mississippi Plain sherds (Richard Fuller, personal communication 1992). A sherd, probably of Moundville Incised, was recovered from Level 2 of the shovel test. This component(s) is underlain by a Late Woodland/Weeden Island component, as sherds of Weeden Island plain and incised as well as Wakulla Check Stamped were encountered in the lower levels of the shovel test. A shell artifact from the test in shown on Figure 10.

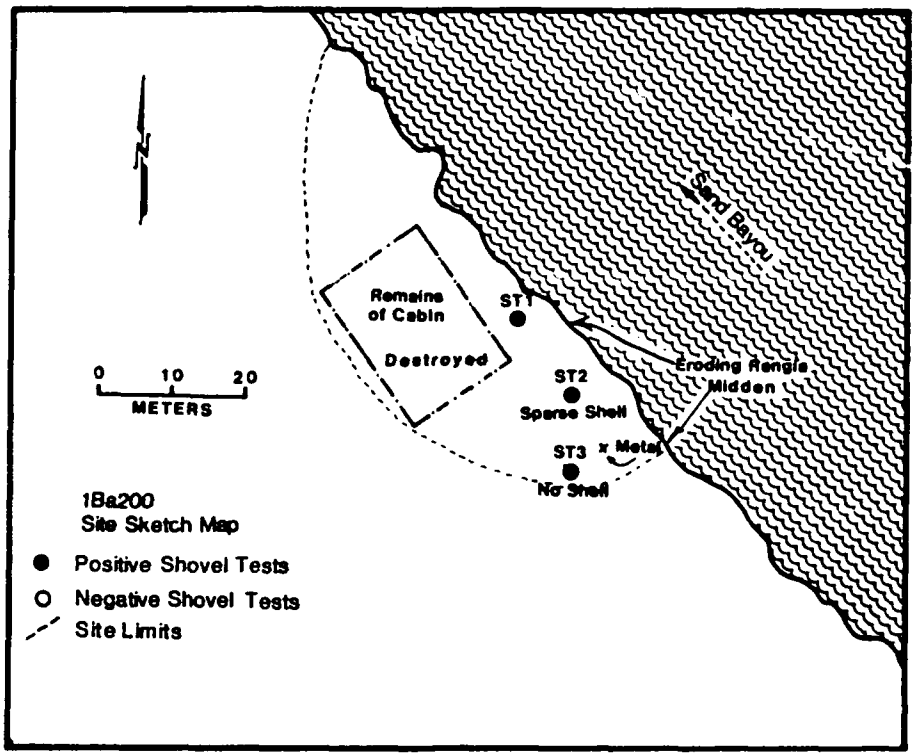


Figure 8. Site 1Ba200, Site Plan.

Figure 9. Eroding Shoreline at 1Ba200.

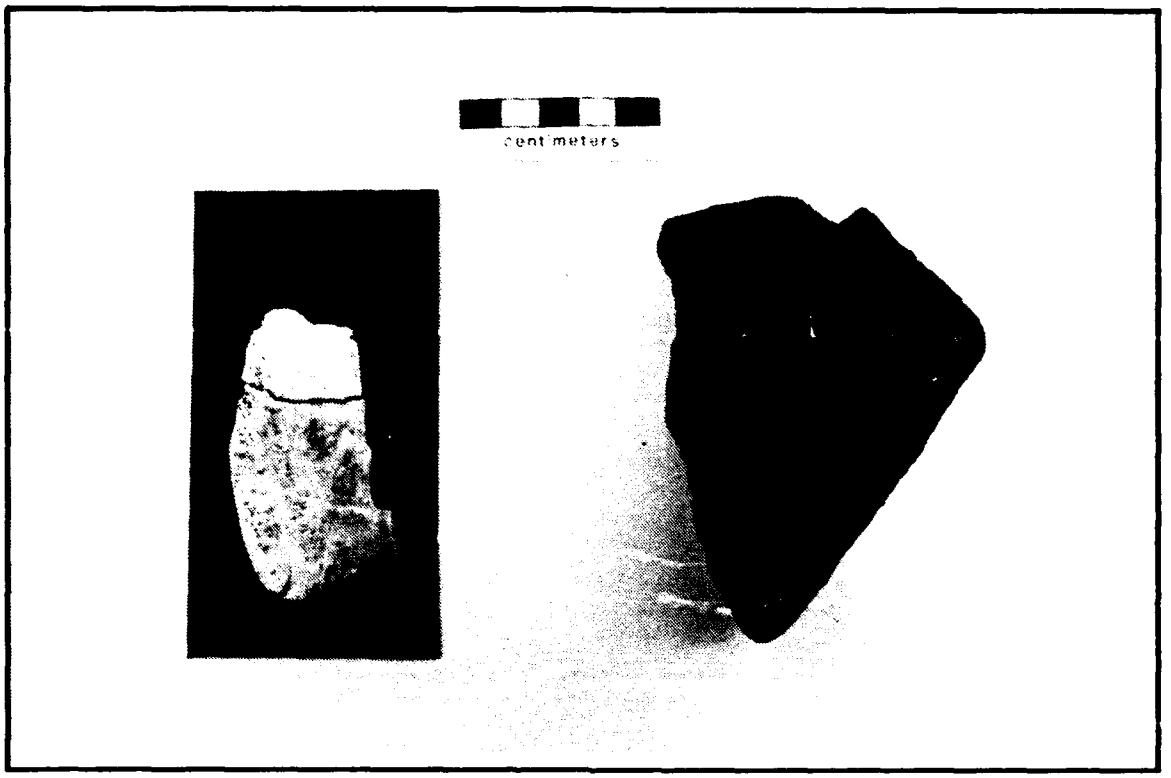


Figure 10. Shell and Stone Artifacts from Sites 1Ba200 and 1Ba215.

In addition to ceramic materials, faunal and perhaps floral remains are well preserved at the site. A cut and ground shell artifact manufactured from marine conch was found in Shovel Test 1. It resembles artifacts usually termed "spoons" in the literature (Figure 10).

Based on the presence of a largely intact prehistoric midden which appears to be stratified, and the presence of well-preserved faunal and perhaps botanical specimens, it is suggested that site 1Ba200 is potentially eligible to the National Register. A direct continuum in occupation from Late Woodland to Mississippian appears to be represented with other components perhaps buried beneath the upper portion of the site. A large portion of the site remains intact; however, erosion is slowly destroying the site from east to west. Testing should be conducted to determine if the site is eligible to the National Register.

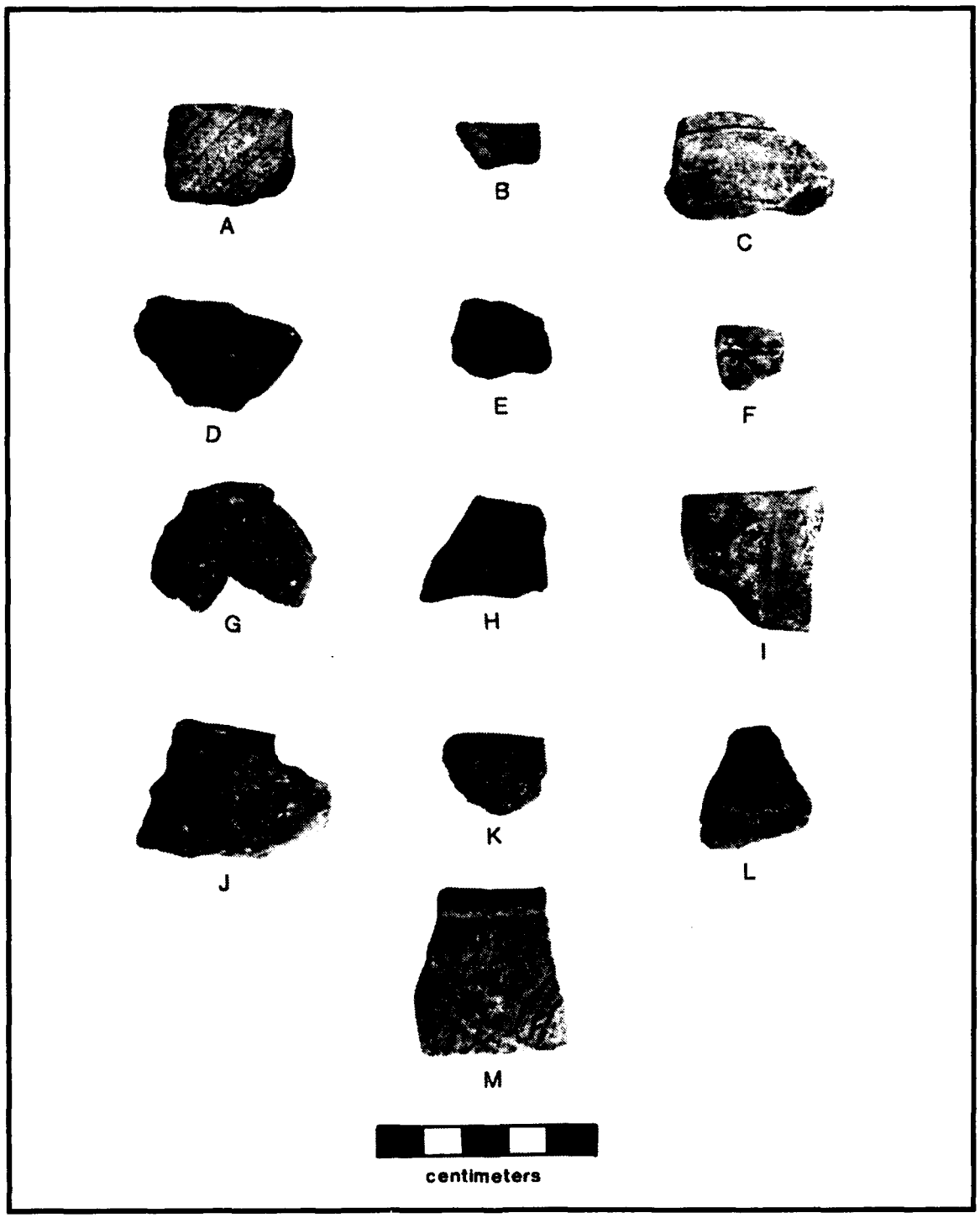


Figure 11. Ceramics from Sites 1Ba200 and 1Ba215. Site 1Ba200, A-B, Carabelle Incised body sherds; C, Weeden Island Incised body sherd; D-E, Wakulla Check Stamped; F, shell-tempered Incised rim; G, Moundville Incised; H-J, Mississippi Plain rims. Site 1Ba215, K, Alexander Punctated rim; L, Basin Bayou Incised; M, Doctor Lake Incised.

**1Ba200 Surface Shoreline**

Ceramics

1 - Carabelle Incised body sherd
1 - Weeden Island Incised body sherd
13 - Mississippi Plain body sherd
4 - Weeden Island Plain body sherd
1 - grog plain body sherd

**1Ba200 Shovel Test level 1 (0 - 20 cm) midden**

Ceramics

1 - Baytown Plain rim sherd
1 - Baytown Plain body sherd
14 - Mississippi Plain body sherds (Bottle Creek paste)
1 - Mississippi Plain rim sherd
1 - shell tempered sherdlet

Shell and Bone

7 - unburned *Rangia*
2 - burned *Rangia*
1 - mammal tooth
2 - mammal bone frags.
2 - turtle plastron frags.

**1Ba200 Shovel test 1 level 2 (20 - 40 cm)**

Ceramics

10 - Baytown Plain body sherds
3 - grog tempered sherdlets
5 - coarse sand/grit plain body sherds
4 - sand tempered sherdlets
1 - coarse sand Plain rim sherd
5 - Wakulla Check Stamped body sherds
1 - Moundville Incised body sherd
1 - shell tempered Incised rim sherd
32 - Mississippi Plain body sherds
2 - Mississippi Plain rim sherds
7 - shell tempered sherdlets
4 - burned clay frags.

Lithics

1 - limonite frag.

Bone

13 - turtle plastron
5 - mammal bone frags.
1 - bird bone frag.
1 - burned mammal frag.

Shell

1 - ground/polished conch shell frag.
13 - unburned *Rangia*
9 - burned *Rangia*

Charcoal

1 - wood charcoal frag.

**1Ba200 Shovel Test 1 Level 3 (40 - 60 cm)**

Ceramics

23 - Baytown Plain-body sherds
26 - grog sherdlets
1 - Carabelle Incised body sherd
3 - Mississippi Plain body sherds
5 - shell tempered sherdlets

Bone

13 - mammal bone frags.
1 - turtle bone frag.

Shell

17 - unburned *Rangia*
4 - burned *Rangia*

Charcoal

5 - wood charcoal frags.

## Site 1Ba215

This site is located in Chuckfee Bay on an "island" and is totally submerged (Figure 12). It consists of an eroding *Rangia* midden which once extended at least 50 more meters into the bay than at present (Figure 13). Severe erosion has all but destroyed the site. Large quantities of pottery are present on the bottom of the bay around the periphery of the island from which the site is eroding. A shoreline exposure of approximately 50 m was observed during the present site visit, but no assessment of midden thickness was possible due to the presence of the water table at the surface of the site. Pottery and lithic material was collected as well as some historic period ceramic material and metal objects. Historic period artifacts are summarized in Appendix II.

Analysis of the prehistoric ceramics (Figure 11) indicates the presence of a fiber tempered Gulf Formational component as well as possibly a Bayou La Batre/Alexander component. The majority of the pottery is plain clay to sand-grit tempered which is probably related to a Middle Woodland Porter Phase occupation. A Late Woodland component also appears to be present. The presence of a Doctor Lake Incised sherd indicates that the site was occupied during the historic Indian period, perhaps by Mobilians or the Pensacola (Richard Fuller, personal communication 1992). Thus a long time span of occupation is suggested by the ceramic data. It is anticipated that further refinement of the ceramic sequence at the site may be possible with additional analysis.

Due to the extremely eroded condition of the site, it is unlikely that it will produce good associational or stratigraphic data. Therefore, despite the apparent long time of site occupation and the presence of the historic Indian component, it is recommended that no further work is necessary at this site.

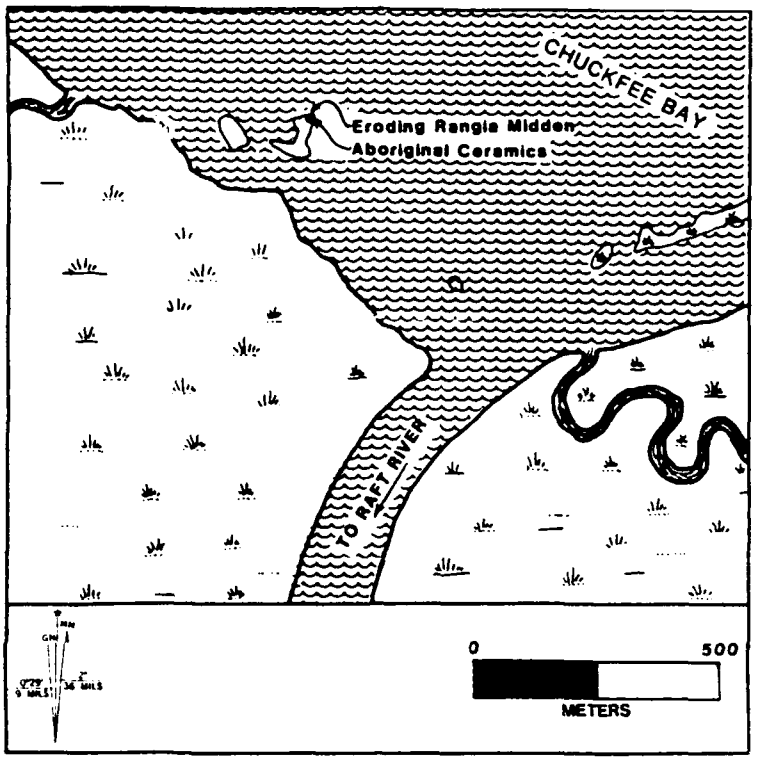


Figure 12. Site 1Ba215, Site Plan.

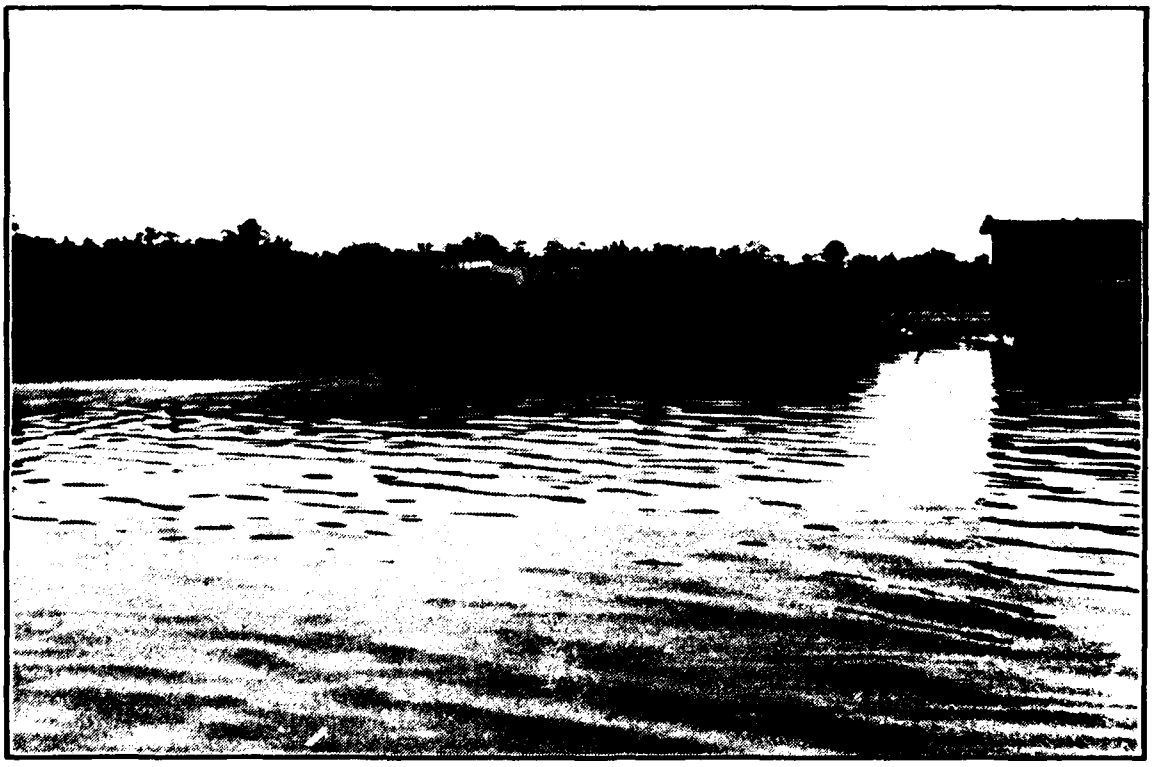

Figure 13. Eroding Shoreline of Site 1Ba215.

**1Ba215 Surface Shoreline**

| Ceramics | Lithics |
|---|---|
| 15 - coarse sand-grit tempered plain body sherds | 3 - ground Fess<br>4 - Fess frags. |
| 3 - grog plain body sherds | |
| 3 - Mulberry Creek Cord Marked body sherds | Bone |
| 1 - Weeden Island Plain body sherd | |
| 1 - Basin Bayou Incised body sherd | 2 - mammal bone frags. |
| 1 - Doctor Lake Incised rim sherd | 1 - turtle plastron frag. |
| 1 - Alexander Punctate rim sherd | |
| 5 - Wheeler Plain body sherds | |

## Site 1Ba289

Site 1Ba289 is a large *Rangia* midden located on the west bank of Big Briar Creek (Figure 14). It was visited twice during the present reconnaissance. The long axis of this linear midden extends parallel to the present shoreline some 100 m (300 feet). Maximum site width is 25 m (75 feet). Shell, pottery, lithic debris, and a human skeleton were observed eroding from the present shoreline (Figure 15). A hunting cabin presently rests on top of the site and has disturbed it slightly.

An extensive surface collection was made at the shoreline, and a single shovel test was dug just south of the cabin (Figure 14). The test was dug to a depth of 90 cm below surface. The water table was encountered at 70 cm below surface, but the midden extends well below it to at least one meter and probably more. Numerous *Rangia* shells, animal bone, and pottery were found (Figure 16).

Analysis of the ceramics (Figure 17) indicates that a protohistoric Bear Point complex component (Mississippi Plain *var. Pine Log*) is present along with a Bottle Creek-related component. A sherd of Moundville Incised, a late variety of Pensacola Incised, and a pottery disc manufactured from a Mound Place Incised sherd indicates that the site was occupied during the Mississippian Period, probably when Bottle Creek was the regional center (Figure 17). Late Woodland occupation at the site appears to be represented by a single Mulberry Creek Cord Marked sherd and Baytown Plain pottery. A Tensaw Creek Phase component may be present, as a large basal grit tempered sherd which appears to be Mobile Cord Marked (Figure 17) was found along the shoreline. The majority of the pottery from this site has sandy-grit to clayey pastes and is undecorated. This suggests a Porter Phase Middle Woodland cultural affiliation (Ned Jenkins, personal communication 1992). A historic period component(s) is also present, as quite a bit of ceramic material and glass were collected from beneath the cabin and along the shoreline (Appendix II).

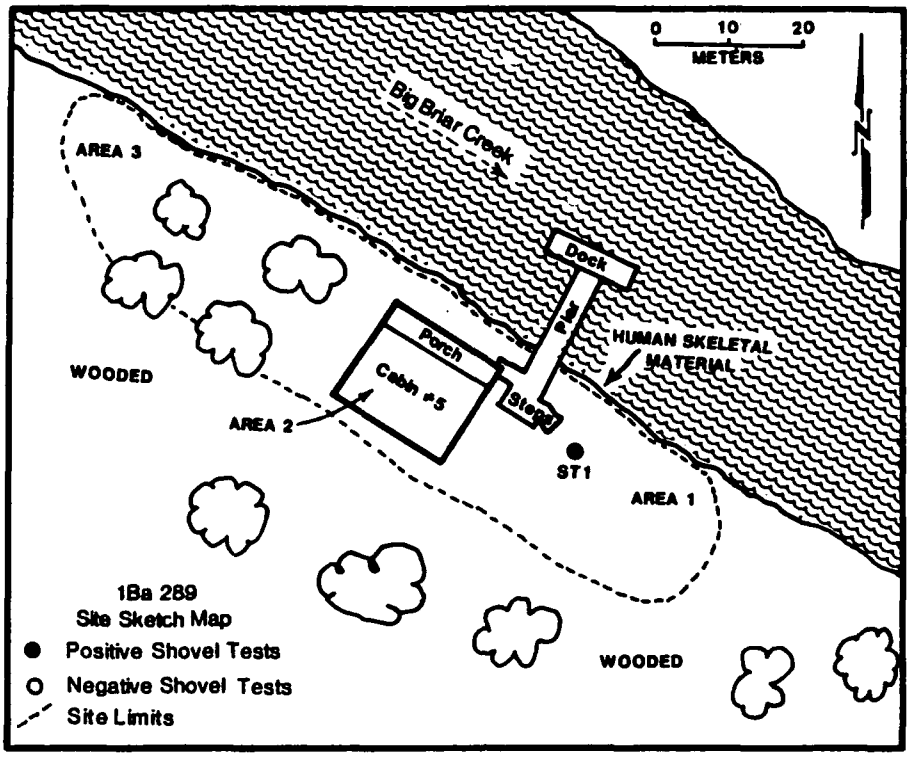


Figure 14. Site 1Ba289, Site Plan.

Figure 15. Eroding Shoreline at Site 1Ba289.

Figure 16. *Rangia* Shell from Shovel Test 1.

An area along the shoreline to the south of the existing dock produced abundant human skeletal remains including teeth and long bones. It is possible that these are associated with the protohistoric Bear Point complex material; however, Porter sherds were the predominant type found with the bone. A description of the human remains is provided by Hill in Appendix I.

This site is considered to be potentially eligible to the National Register as it has produced the remains of an adult male skeleton which may date to either the Middle Woodland Porter Phase or later time periods. An aboriginal cemetery may be present. Additionally, this is one of the largest and thickest middens tested during the field work, and it contains preserved faunal and perhaps floral materials. The vertical limit of the midden is unknown. The large amount of pottery recovered attests to the importance of the site as a habitation locale for a long series or prehistoric and historic occupations. Components recognized include historic, protohistoric, Mississippian, Tensaw Lake, Weeden Island, Miller III, Porter, and Bayou La Batre. The site should be preserved and tested for eligibility to the National Register, as it is presently undergoing extensive erosion into Big Briar Creek.

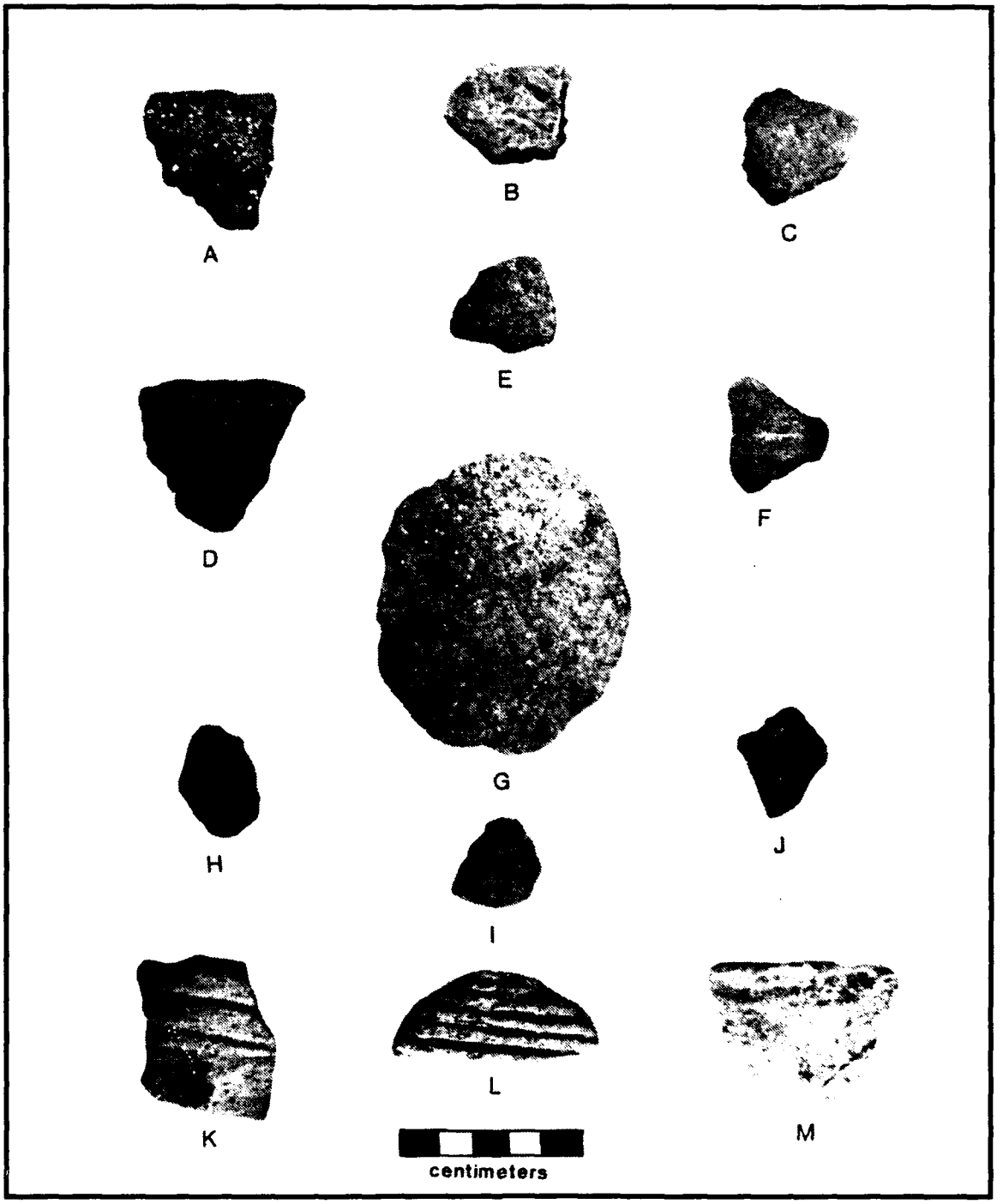


Figure 17. Ceramics from Site 1Ba289. A, Bayou La Batre Plain rim; B, Clay Tempered Incised; C, Baytown Plain rim; D, Coles Creek Incised rim; E, Santa Rosa Stamped; F-G, sand tempered check stamped; H, Carabelle Incised body sherd, I, Mulberry Creek Cord Marked body sherd; J, Carthage Incised; K, Mound Place Incised disc; L, Moundville Incised var. Moundville rim.

**1Ba289 Area 1 (Shoreline)**

Ceramics

1 - Mobile Cord Marked body sherd
1 - Carthage Incised body sherd
1 - eroded coarse sand incised body sherd
5 - coarse sand/grit plain body sherds
2 - Wakulla Check Stamped body sherds
13 - Mississippi Plain, *var. unspec.* body sherds
1 - Mississippi Plain, *var. unspec.* rim sherd
1 - Bayou La Batre Plain rim sherd
51 - Baytown Plain body sherds

**1Ba289 Area I (Shoreline-Additional Collection)**

Ceramics

1 - Mulberry Creek Cord Marked body sherd
1 - Mulberry Creek Cord Marked body sherd
7 - Tchefuncte-like paste plain body sherds
1 - Tchefuncte-like paste incised body sherd
2 - Pensacola Incised rim sherds
1 - grog tempered incised rim sherd
1 - Santa Rosa Stamped body sherd
1 - Carabelle Incised body sherd
20 - Porter Phase, Baytown Plain body sherds (dense grog)
1 - Baytown Plain rim (dense grog)
57 - Porter Phase, Baytown Plain body sherds (sparse grog)
10 - sandy paste/sand tempered plain body sherds
18 - coarse sand/grit tempered plain body sherds
1 - Mound Place Incised *var. Waltons Camp* disc
1 - Moundville Incised, *var. Moundville* rim sherd
14 - Mississippi Plain, *var. unspec.* body sherds
2 - Mississippi Plain, *var. Pine Log* body sherds

Lithics

5 - quartz flake fragments
1 - quartzite fragment
1 - Fess frag.
1 - limonite frag. - poss. smoothed

Shell and Bone

6 - unburned *Rangia*
6 - snail
2 - poss. turtle
1 - bird bone frag.
1 - mammal bone frag.

**1Ba289 Area 3 (North of Cabin)**

Ceramics

5 - Mississippi Plain body sherds
3 - sand tempered plain body sherds
1 - grog tempered plain body sherd

**1Ba289 Shovel Test 1 Level 1 (0 - 15 cm)**

Ceramics

2 - Baytown Plain body sherds

Lithics

2 - concretions
1 - siliceous pebble

Shell and Bone

7 - unburned *Rangia*
1 - burned *Rangia*

Charcoal

4 - wood frags.

**1Ba289 Shovel Test 1 Level 2 (15 - 30 cm)**

Ceramics

3 - sand tempered plain body sherds
6 - Baytown Plain body sherds
6 - grog tempered sherdlets

Shell and Bone

12 - *Rangia*
2 - burned *Rangia*

Charcoal

2 - wood frags.

**1Ba289 Shovel Test 1 Level 3 (30 - 40 cm) midden**

Ceramics

1 - Baytown Plain body sherd
1 - sand tempered plain body sherd

Shell and Bone

8 - unburned *Rangia*
2 - burned *Rangia*

**1Ba289 Shovel Test 1 Level 4 (40 - 50 cm) midden**

Ceramics

1 - Baytown Plain body sherd
5 - sand tempered sherdlets

Shell and Bone

5 - unburned *Rangia*
1 - burned *Rangia* frag.
1 - bone frag.

**1Ba289 Shovel Test 1 Level 5 (50 - 60 cm) midden**

Ceramics

6 - Baytown Plain body sherds
4 - grog sherdlets

Shell and Bone

7 - unburned *Rangia*
1 - burned *Rangia*

**1Ba289 Shovel Test 1 Level 6 (60 - 70 cm) midden**

Ceramics

2 - Baytown Plain body sherds
1 - grog sherdlet

Shell and Bone

14 - unburned *Rangia*
6 - burned *Rangia* frags.

**1Ba289 Shovel Test 1 Level 7 (70 - 80 cm) midden in water table**

No ceramics

Shell and Bone

3 - unburned *Rangia*
1 - burned *Rangia*
2 - bone frags.

**1Ba289 Shovel Test Level 8 (80 - 90 cm) midden in water table**

Shell and Bone

13 - unburned *Rangia*
3 - burned *Rangia*
1 - bird bone frag.

## Attempt to Relocate Sites

An attempt was made to relocate sites 1Ba191, 1Ba192, and 1Ba198. Site 1Ba191 could not be relocated due to time limitation and its location at the north end of Grand Bay where access was poor. Site 1Ba192 could not be relocated. An attempt was made to approach this site by boat by poling up a small tributary of Oak Bayou; however, the water was too shallow and the vegetation too thick to allow passage. Since the site is surrounded by a large expanse of marsh-swamp land, walking in would have been very difficult. It was decided that fall-winter would be a better time to gain access to the site, so the attempt was abandoned.

An attempt was also made to relocate site 1Ba198, reportedly located on the west side of Grand Bay. Access by boat was limited, however, and time did not allow revisitation of this site.

The following chapter summarizes the number of components documented at the sites discussed above and provides a research design and model of site location and formation for the study area.

# CHAPTER VI
# RESEARCH DESIGN AND MODEL OF HUMAN SETTLEMENT FOR THE MOBILE-TENSAW DELTA

## INTRODUCTION

As a unique environmental region situated at the head of Mobile Bay, the Mobile-Tensaw Delta offers a virtual laboratory for the study of prehistoric hunter-gatherer societies. The dynamic nature of the delta has presented many opportunities and hardships to the aborigines who have frequented the delta for at least 3,000 years (Curren 1976; Stowe 1977, 1990; Knight 1977, 1984; Bense 1980; Brose *et al.* 1983). While the archaeological record is replete with sites dating from the Gulf Formational (Walthall and Jenkins 1976) through historic periods, very little is known regarding Paleoindian and Archaic occupation of the region (Curren 1976; Brose *et al.* 1983).

Previous models of human settlement have drawn upon both ethnohistoric records and archaeological data in attempts to predict the location and frequency of archaeological sites (Curren 1976; Knight 1977, 1984; Knight and Adams 1981; Brose *et al.* 1983). Previous models have either concentrated on the Late Prehistoric cultures and the role of agriculture in their economies (Knight 1984), and/or have relied upon historical accounts of native settlement/subsistence patterns which were projected back in time where deemed appropriate (Curren 1976). As noted by Brose (1983:197), these models appear to be very appropriate for the Late Mississippian/protohistoric periods in the Mobile-Tensaw Delta. Speculations regarding the nature of Paleoindian through early historic period settlement and subsistence patterns have been put forth by Brose *et al.* (1983).

While a large number of sites have been recorded for the delta region, there has been very little substantive work at the site level with few exceptions, as pointed out by Knight (1977) (c.f. DeJarnette 1976; Stowe 1977; Bense 1980). Additionally, other than the surveys of Stowe (1981), Curren and Stowe (1971), and the reconnaissance survey of Brose *et al.* (1983), very little in the way of systematic survey has been conducted. None of these projects was equipped to recover the kinds of data needed to adequately assess the nature of prehistoric adaptations to the Mobile-Tensaw deltaic region.

A research design which allows systematic evaluation and interpretation of a wide range of sites from all time periods has not been put forth to date. The following research design is meant to serve as a point of departure for beginning to build a sound, representative data base for the Mobile-Tensaw Delta region. It emphasizes both the uniqueness of the Mobile-Tensaw Delta ecosystem and its geographical position with regard to neighboring culture areas and the Gulf of Mexico.

## RESEARCH DESIGN FOR THE MOBILE-TENSAW DELTA REGION

Knight (1984) has pointed to the dynamic nature of adaptations along the Gulf Coast from Texas to Florida. He indicates that although general models of coastal adaptations versus inland adaptations have the potential to allow regional or world-wide evolutionary comparisons, they fail to explain the diversity of human social relations which developed on the Gulf Coast throughout prehistory. Knight (1984) goes on to argue that if we are to understand the variation manifest in Gulf coastal societies, then a small-scale or micro-environmental approach is necessary; this would allow identification of local factors important in conditioning human behavior. The research design presented below offers a set of theoretical and methodological concepts which may prove useful in future archaeological studies in the Mobile-Tensaw Delta and Mobile Bay regions. The major advantage of the approach presented below is that it allows for hypotheses to be devised and then tested against expectations of the archaeological record. In this sense, it is an attempt to place archaeological research in the Mobile-Tensaw Delta region on a more empirical footing.

### Theoretical and Methodological Concepts

The spatial organization and level of social complexity differ among sites and site complexes in the annual territorial rounds of hunters and gatherers (Binford 1983a, 1983b; Yellen 1977). Since the Mobile-Tensaw Delta is located very near the coastal littoral zone, hunter-gatherer models concerned with both coastal and inland adaptations seem particularly relevant to the present study area.

Studies which have provided insight into patterns of coastal resource utilization and concomitant settlement systems include the work of Osborne (1977) and Yesner (1981). Osborne (1977:353) has expressed a view of aboriginal exploitation of marine resources in which he "...would expect to observe exploitation of marine resources during seasonal lows in terrestrial production, e.g., the spring season or during the collapse of terrestrial ecosystems." Furthermore, Osborne states that marine food resources are "less than optimal" compared with terrestrial resources due to a variety of factors (Osborne 1977:301).

Carlson (1983) suggests that the most intensive use of *Rangia* middens on the upper Texas coast occurred in the spring with a peak in April and May. Seasonal variability in the use of coastal and bay shell middens in the southeastern United States suggests that intensive utilization took place during the period of the species' most rapid growth (Claassen 1986:31). These data could hold important clues to aboriginal movement between deltaic and coastal or littoral resources.

In order to recognize and study different cultural adaptations through time, two basic sets of information are needed. The first

is chronological or temporal. The position of a particular site component in time must be firmly established prior to subsequent studies of the nature of settlement and subsistence practices (Jenkins 1983). The second type of data are the material remains of the society under study, including features, artifacts, and ecofacts and their distribution over the landscape.

Whitlam (1981) has presented a study which focuses upon isolating variables critical to understanding coastal adaptations and on developing settlement types which may serve to organize patterns of site distribution in regional settings. His model seems particularly important to the Mobile-Tensaw Delta, since it provides the means for objectively assessing the nature of hunter-gatherer subsistence and settlement behavior in both coastal/littoral and inland environments.

Data from previous research in the Mobile-Tensaw/Mobile Bay regions suggest that throughout prehistory, aboriginal groups in the area were relatively small and moved in an annual round; no evidence of permanent occupation has been found, with the possible exception of Mississippian villages. Both nucleated and dispersed settlement systems are recognized by Whitlam. These are used here to specify different models and expectations or archaeological correlates pertaining to each model.

According to Whitlam (1981), nucleated settlement systems are characterized by sites which represent the remains of an entire community. In contrast, dispersed systems have numerous settlements located in a variety of settings. Whitlam further indicates that evidence of a nucleated system should include the following: 1) a relative assessment of sites as large, 2) fewer sites, 3) evidence of multiple domestic units, 4) limited areas set aside for mortuary practices or ceremonies, and 5) primary use of local raw materials. In contrast, dispersed systems may be expected to exhibit the following attributes in the archaeological record: 1) small site size, 2) frequent sites, 3) mortuary and ceremonial areas separate from domestic units, 4) single domestic units at sites, and 5) the presence of exotic raw materials. Whitlam stresses that these are not to be interpreted rigidly, and that combinations of these general patterns may occur, depending upon local ecological conditions.

In terms of subsistence, Whitlam draws a distinction between intensive and extensive systems. Intensive systems usually produce a restricted set of different faunal remains, and the distribution of those remains will be similar from site to site, as will the tools and features required for acquiring and processing them (Whitlam 1983). Extensive systems, on the other hand, exhibit a variety of different kinds of resources, a wide range of floral and faunal remains, different tools and facilities for procurement and processing of different resources, exploitation of varied resources in different environments, and variation in faunal and floral

resources by environment. It should be clear that each of these basic settlement and subsistence types requires different amounts, kinds, or degrees of resource scheduling. Social units are therefore adapted to the specific requirements of each.

Other models of hunter-gatherer behavior such as that proposed by Binford (1983a) may also be applicable to the study area, particularly with regard to integrating a particular settlement model at the regional level. Especially important here is a means of articulating sites or locations within a settlement pattern and understanding "the functional relationships among the sites contained within a settlement pattern" (Winters 1969:110), which is referred to here as the settlement system. One critical aspect of beginning to develop site typologies and gathering the relevant data needed to test settlement models lies in interpretation. Clearly, sites should be interpreted within a broad framework of the regional setting, rather than in isolation. This requires, as noted by Aten (1983), Binford (1983a), and Ensor (1987:31), partitioning of the archaeological record into a series of meaningful units which may be used to "build" regional settlement and subsistence models.

The challenge for the archaeologist is to develop research designs which will allow collection of the kinds of data needed to test models such as those described above. Statistically representative samples of sites and their contents are imperative, as are the means of quantifying the relationships which may or may not exist between individual sites and entire settlement systems. It is clear that in order to obtain the types of data needed to test different models of settlement and subsistence within the Mobile-Tensaw Delta region, a systematic, well-conceived research plan designed to gather the necessary data will be crucial. The nature of the resource base has been expounded upon in the previous chapters, based on previous survey and excavation data, including that obtained during the present study. The next section is concerned with providing a predictive model of site location and density. It is based primarily on archaeological data obtained from Brose *et al.* (1983) and Stowe (1981) and the geomorphic study by Wilson (this volume) and Lamb (1983).

## MODEL OF HUMAN SETTLEMENT FOR THE MOBILE-TENSAW DELTA

### Site Location

Wilson (Chapter 2) has described the landforms available for habitation at varying times in the Mobile-Tensaw Delta. For the middle and lower deltas which encompass the study area, such areas include crevasses, natural levees along active and relic channels of the major distributaries, and the shores of open and partially filled basins. The natural levees rise .5 to 1 m above normal water level. Figure 18 is a schematic redrawn from Lamb (1983:Figure 10) which shows in cross-section the present surface topography

of the Mobile-Tensaw Delta. This gives a generalized view of the entrenched distributaries and associated levees which parallel them. Also, note the terrace remnants located at the edge of the delta and the steep escarpment on the north-northeast side of the delta. Given the low elevations comprising the majority of the delta proper, it is expected that aboriginal and historic sites may be located on any slight rise over 5 feet or .5 to 1 m in height.

Brose *et al.* (1983) consistently found that post-Archaic prehistoric sites were located on well-drained soils comprising levees or overbank deposits along the major distributaries and on slight rises in elevation near bays and basins in the delta. There was some variation in site location for different cultural periods, as Late Gulf Formational sites were located on well-drained soils along major distributaries, but away from bays and basins. Middle and Late Woodland sites, as well as Mississippian sites, were also located on well-drained soils along major distributaries, but also near bays and basins. Protohistoric sites were most often found near bays and along connecting waterways on levees as well as on bluff margins (Brose *et al.* 1983).

Archaic sites were found most often on terraces and bluff margins overlooking the delta (Brose *et al.* 1983). Paleoindian and Archaic site location data in the delta proper are generally unavailable due to the fact that land surfaces exposed for habitation from around 12,000 B.P. up until 3000 B.P. are either deeply buried or eroded away (Curren 1976; Brose *et al.* 1983).

Sites revisited or newly recorded during the present survey fit the pattern suggested by Brose *et al.* (1983), as they were all located along major distributaries or within 500 m (1500 feet) of a major distributary or near bays or basins. Additionally, no components earlier than Middle Gulf Formational, or approximately 3000 years old, were identified.

## Site Formation Processes

Most of the sites visited during the reconnaissance appeared to have formed in a generally similar manner. The model suggested by Gagliano (1984:28) for the Mississippi deltaic plain is directly applicable to the study area. Figure 19 shows the potential relationships between archaeological deposits and natural levee deposits. Natural levees appear to be the location of many sites within the delta. Prehistoric or historic remains may be incorporated into the levee as it aggrades. They may also be deposited in backswamp deposits at lower elevations, or they may be deposited after the distributary or stream channel has been abandoned (Gagliano 1984). Finally, archaeological materials may be deposited in abandoned, filled channels. Of course, the exact mechanism(s) of deposition and post-depositional effects ultimately determine the contextual integrity of the deposit as well as the degree of preservation of perishable materials.

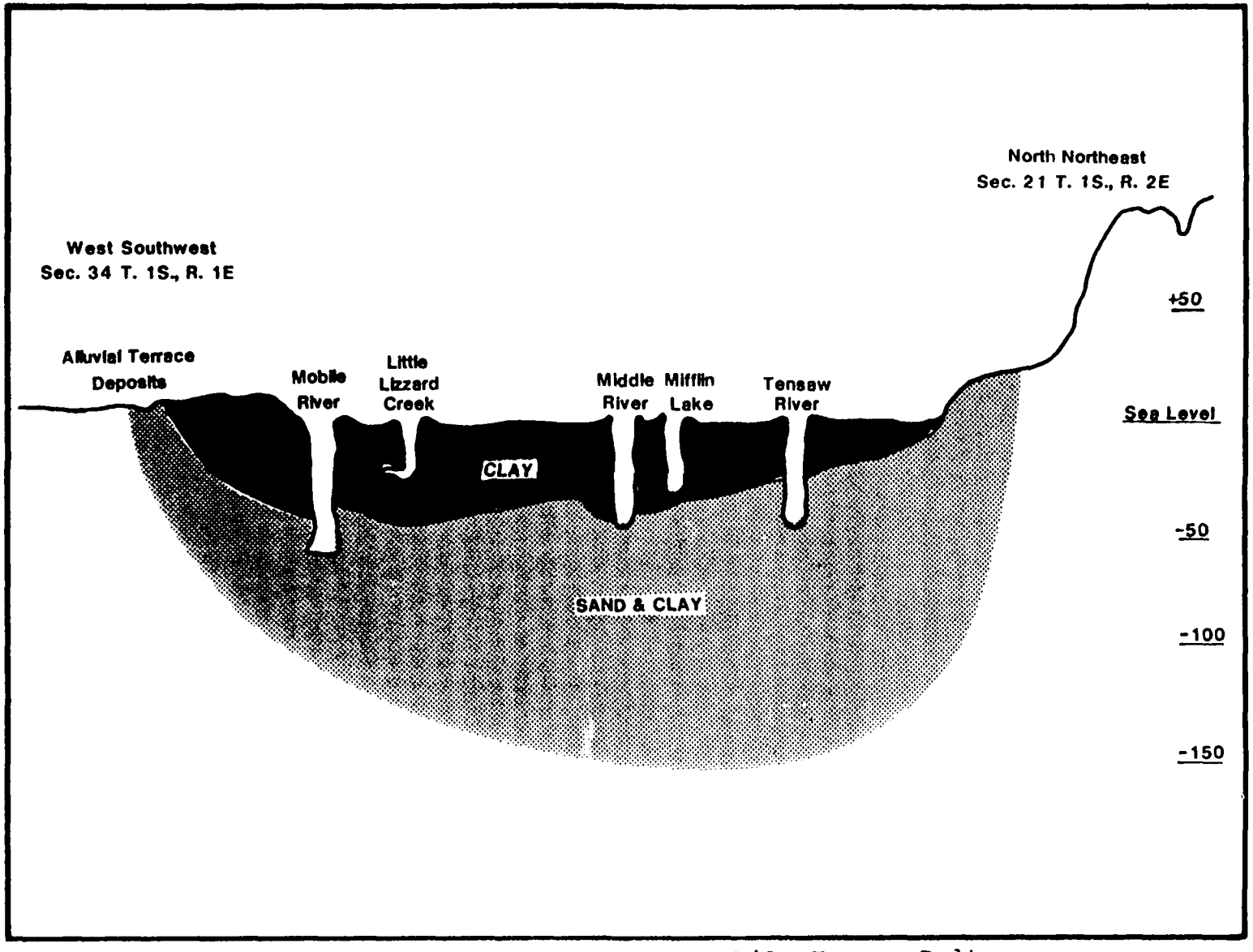


Figure 18. General Cross-Section Through the Mobile-Tensaw Delta.

As noted by Stowe (1981) and Gagliano (1984), sites formed in or on natural levees may be subjected to subsidence and slow burial by alluvial sediments (Figure 19). All the sites investigated had cultural deposits which extended into the water table, indicating either a rise in sea level, site subsidence, or both since the site was last occupied. This submersion results in excellent preservation of archaeological deposits, including perishables in many instances. These data accord well with the results of the reconnaissance survey, since organic materials were recovered from every site examined. The heavy concentrations of *Rangia* shell in the middens have undoubtedly also contributed to organic preservation. It appears that the primary mechanism of site formation and preservation has been concurrent levee and site aggradation coupled with gradual site subsidence and/or a rise in sea level. Some natural levees were also occupied after the associated distributary had been abandoned. However, these sites would also be subjected to subsidence and burial by deltaic flooding. Archaeological materials in the study area may be expected to occur in all the depositional contexts mentioned above as depicted on Figure 19. Determination of primary versus secondary deposits should be of prime concern in any site investigation.

**Site Frequency by Cultural Component**

Brose *et al.* (1983) noted that in the delta, certain archaeologically sensitive environments occur as mentioned above. The Black Warrior-Tombigbee Corridor Study compared the locations of 360 sites in a host of environmental zones, including the Mobile-Tensaw Delta. That study calculated the number and percentage of sites by cultural components and physiographic zones. Cultural components recognized for the delta swamp and delta marsh zones included Archaic, Early Woodland/Gulf Formational, Middle-Late Woodland, Mississippian, protohistoric, and historic. A large number of sites were multi-component or had indeterminate components. A total of five Archaic sites were noted for the delta swamp zone. For the delta swamp/marsh zones, there were thirty-six Early Woodland/Gulf Formational components, seventy-four Middle-Late Woodland components, seventy-four Mississippian components, thirteen protohistoric components, and forty-two historic components. The results of the present reconnaissance yielded a total of twenty-three components from the five sites visited. No Archaic components were noted. A total of four Gulf Formational components, four Middle Woodland components, seven Late Woodland components, three Mississippian components, one protohistoric component, and four historic components were recognized (Table 1). Site 1Ba215 contained both an historic Indian and an Anglo-American component.

Comparison of the percentages of components between Brose *et al.*'s study and those from the present study indicates fairly close conformity despite the large difference in sample size. The main difference noted is the higher percentage of Mississippian sites

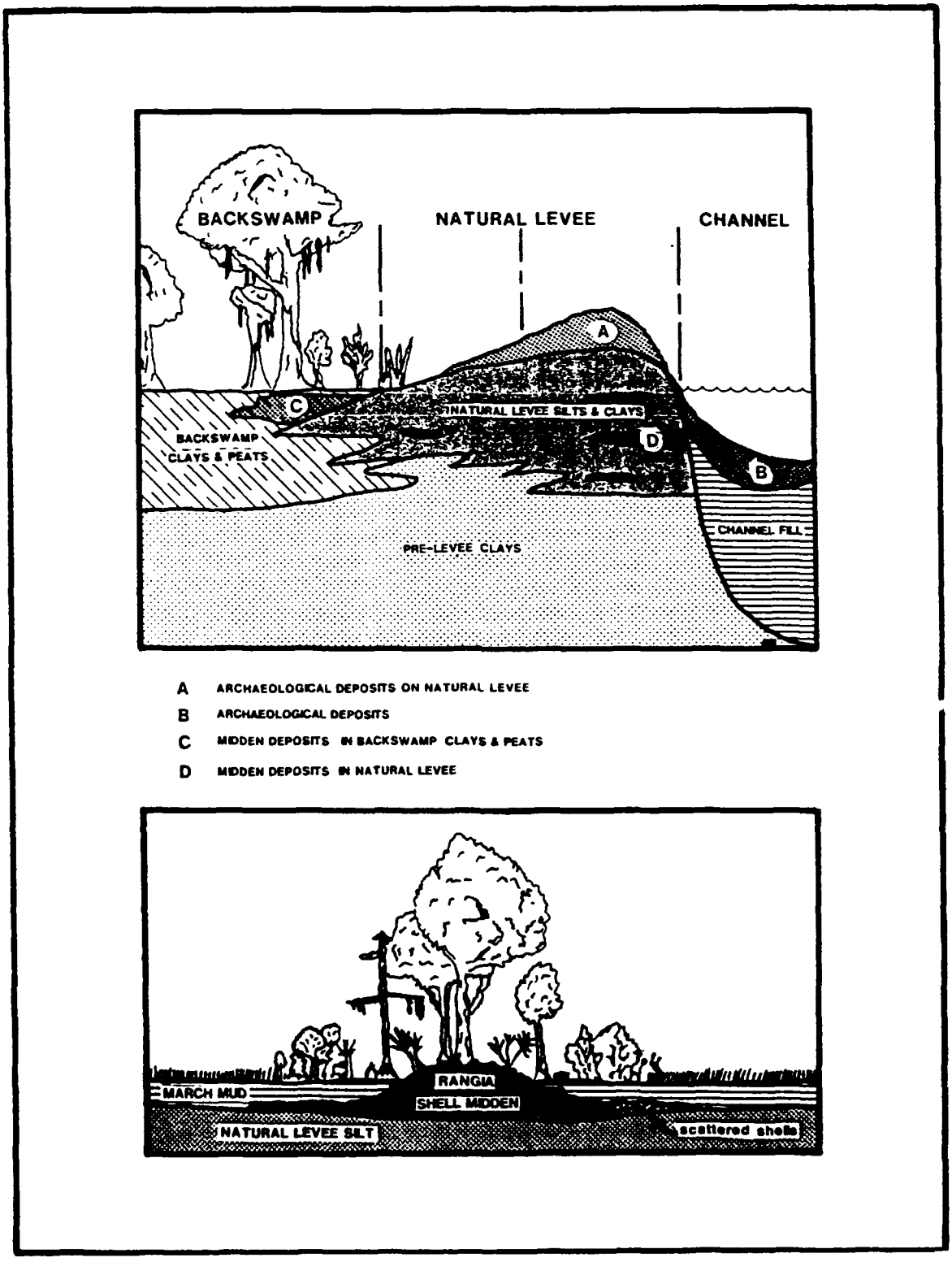


Figure 19. Schematic Drawing of Deltaic Site Formation. (Redrawn from Gagliano (1984:Figures 1.17 and 1.18)

Table 1. Summary of Cultural Components by Site.

| Component | 1* | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1Mb97** | x | - | x | x | x | - | x | x | - | - | 6 |
| **1Mb129** | - | - | - | - | - | - | x | - | - | - | 1 |
| **1Ba200** | - | - | x | - | x | ? | ? | - | - | - | 2 |
| **1Ba215** | x** | - | - | - | - | x | x | - | x | x | 6 |
| **1Ba289** | x | x | x | x | x | x | x | x | - | - | 8 |
| Total | 4 | 1 | 3 | 2 | 3 | 2 | 4 | 2 | 1 | 1 | 23 |

*Note:1=Historic; 2=protohistoric; 3=Mississippian; 4=Tensaw Lake; 5=Weeden Island; 6=Miller III; 7=Porter; 8=Bayou La Batre; 9=Alexander; 10=Norwood/Wheeler.
**Note: Both historic Indian and Anglo-American components present.

reported by Brose *et al.* (1983) (30 percent) as opposed to only 12 percent for the present study, and the higher total (48 percent) for Middle-Late Woodland sites reported in this study than reported by Brose *et al.* (1983) for their Middle-Late Woodland sites (30 percent). At any rate, the differences noted do not appear to be statistically significant, although the results of a cross-tabulation analysis (Table 2) are not necessarily valid due to the small sample size of the present study.

These data indicate that Gulf Formational components are fewer in number than succeeding Middle Woodland Porter Phase occupations. Late Woodland components belonging to Weeden Island, Tensaw Lake, and perhaps Miller III are at least as common as Porter components. Mississippian and protohistoric components occur with regularity, as do historic Anglo components. Only one definite historic Indian component was noted. The multi-component nature of most sites underscores the fact that there were probably favored areas which offered unique opportunities with regard to subsistence. This, in turn, may indicate a certain uniformity and redundancy in settlement patterns through time with similar resources exploited.

Table 2. Cross-Tabulation of Cultural Components for the Delta Swamp and Delta March Zones (Brose *et al.* 1983 and Present Study).

| FREQUENCY / EXPECTED / TOT PCT / ROW PCT / COL PCT | 1 | 2 | 3 | 4 | 5 | TOTAL |
|---|---|---|---|---|---|---|
| Present Study | 4 | 1 | 3 | 11 | 4 | 23 |
| | 4.0 | 1.2 | 6.8 | 7.5 | 3.5 | |
| | 1.5 | 0.4 | 1.1 | 4.2 | 1.5 | 8.8 |
| | 17.4 | 4.3 | 13.0 | 47.8 | 17.4 | |
| | 8.7 | 7.1 | 3.9 | 12.9 | 10.0 | |
| Brose *et al.* 1983 | 42 | 13 | 74 | 74 | 36 | 239 |
| | 42.0 | 12.8 | 70.2 | 77.5 | 36.5 | |
| | 16.0 | 5.0 | 28.2 | 28.2 | 13.7 | 91.2 |
| | 17.6 | 5.4 | 31.0 | 31.0 | 15.1 | |
| | 91.3 | 92.9 | 96.1 | 87.1 | 90.0 | |
| TOTAL | 46 | 14 | 77 | 85 | 40 | 262 |
| | 17.6 | 5.3 | 29.4 | 32.4 | 15.3 | 100.0 |

CHI SQUARE = 4.25 with DF= 4 p value = 0.374

*1=Historic; 2=Protohistoric; 3=Mississippian; 4=Middle-Late Woodland; 5=Early Woodland/Gulf Formational.

While the results of the present study are greatly limited by the small sample size, when viewed in conjunction with previous studies, it becomes clear that the archaeological potential of the study area is tremendous. Archaeologically sensitive locations have been discussed and the frequencies of cultural components enumerated. It may be expected that similar percentages of sites are widely distributed over the delta in archaeologically sensitive environmental zones.

# CHAPTER VII
# SUMMARY AND RECOMMENDATIONS

## Summary

This report has described the results of a cultural resources overview and limited reconnaissance in the Tennessee-Tombigbee Wildlife Mitigation project area, Mobile-Tensaw Delta, Alabama. The archival/literature search methods have been described, as have the field methods. A detailed background section on the environment, including the geomorphology of the Mobile-Tensaw Delta, has been provided. Additional sections on previous archaeological and historical work pertinent to the study area and a review of the prehistory and history of the Mobile-Tensaw Delta region has been included. Complete site descriptions have been provided for all sites visited, and the artifacts and other materials have been classified and presented in tabular form. Illustrations have been provided as necessary.

The previous chapter presented a general research design which may prove useful in future survey/excavation work in the delta. It was designed to allow interpretation of a broad range of site types along with the ability to specify the archaeological correlates or test expectations necessary to evaluate project results. Comparisons of site location by time period were also made using previous survey data and those from the present study. A generalized model of site location was presented along with a discussion of site formation in a deltaic environment. Finally, the results of the present study were summarized by quantifying the number of cultural components at each site and together. These were then compared to Brose *et al.*'s (1983) previous estimates concerning prehistoric and historic site density in the delta and found to be very similar despite differences in sample size.

A total of five sites were visited during the course of the field reconnaissance, four previously recorded and one newly recorded. An attempt was made to locate other previously recorded sites; however, these attempts failed due to time limitations and difficulty with access. Cultural components recognized include Middle and Late Gulf Formational, Middle Woodland, Late Woodland, Mississippian, protohistoric, historic Indian, and Anglo-American. The sites were all located close to major distributaries and bays and basins. The multi-component nature of most sites indicates that certain areas within the delta may have been more productive in terms of subsistence.

## Recommendations

On a methodological note, optimal survey conditions in this portion of the delta are at low tide or during the drier months when the river level is down. Since the sites visited on this survey were at least partially below the water table, it seems clear that they will not be visible at high tide or when the river level is high. These observations should be taken into account when planning future survey or excavation work. Survey work should be scheduled on a daily basis to coincide with fluctuating tide levels, and if possible, during the fall when the river level is lowest. The angle and position of the sun in relation to the viewing direction is also important when trying to locate shell middens (Stowe 1981).

Local informants should also be used as a source of information on possible site locations. Many of the local people have hunted and fished in the project area all their lives. While they often cannot remember specifics, when they do it is invaluable information. The use of color infrared photography to identify vegetation often associated with archaeological sites should be attempted on a systematic basis. This will entail field verification of plant species on archaeological sites and a method to recognize these plants on the photographs. Time did not allow such a procedure to be tested during the present project.

Given the high site density recorded for habitable landforms, potential site significance, and eroded condition of many potentially significant sites in the project area, it is recommended that an inventory of cultural resources should be made which attempts to locate and record as many sites as possible. Preferably, this survey should take place during a time of year which would maximize site discovery. It is recommended that ideally, a complete pedestrian bank survey of the major distributaries and of secondary streams within 500 m of their juncture with a major distributary should be conducted. Additionally, the shorelines of the major bays and basins should be surveyed using similar methods. Auger testing and shovel testing of elevated areas and areas where surface indications point to the possible presence of a site should receive highest priority. Other site detection methods mentioned above such as informant interviews and color infrared photography should be employed wherever feasible.

In the event a complete bank survey cannot be performed, a statistically valid sampling design should be worked out which will allow quantitative statements regarding site location and density by time period. Once a site is discovered, a representative sample of materials should be collected, sufficient to allow quantitative comparisons. This may require the excavation of many shovel tests, as most sites will be buried.

Site 1Mb97 and its extension 1Mb97-A should be preserved and

protected. A single human bone fragment was encountered during shovel testing which may indicate that a burial(s) is present. Erosion of the western edge of the site is presently taking place. Ideally, testing should take place at this site to determine eligibility to the National Register. This should involve coring on a grid to accurately determine site vertical and horizontal extent, followed by a cleaning and exposure of the vertical cutbank on Bayou Sara. Based on the results of the coring and profile, test units of appropriate size should be excavated in sufficient quantity to gather a representative sample of artifacts, ecofacts, features, and other materials. It is estimated that this testing program would require approximately 2 weeks with a 6-person crew or some 480 person hours for the fieldwork.

Site 1Mb129 is a small midden which is eroding from the bank of Bayou Sara. If the site can be relocated, it is recommended that further assessment be undertaken for the reasons given in the site description to determine whether the remains are from a short, single component encampment or a remnant midden patch. It is estimated that 2 person days (16 hours) should be sufficient to make the assessment. The exact limits of the site should be determined by coring/shovel testing. A 1 x 1 m sample of the midden should be waterscreened to recover ceramics and faunal remains. Laboratory analysis of ceramics should be used to determine the multi-component or single component status of the site.

Site 1Ba200 should also be preserved and protected. It is located on Corps property and is eroding slowly from east to west. The site should be tested to determine significance. A plan similar to the one outlined for 1Mb97 is recommended. An estimated 480 person hours will be required in the field to adequately assess this site.

Site 1Ba215 has almost completely eroded into Chuckfee Bay and is almost completely inundated by the bay. Due to these factors, very little hope exists for recovering significant data. The site is not considered significant, and no further work is recommended.

Site 1Ba289 is a large *Rangia* midden located on Big Briar Creek. This site is considered potentially significant and should be tested as soon as possible, since it is actively eroding into the creek. Skeletal material from a single adult male was found eroding from the shoreline. A testing program similar to the one recommended for site 1Mb97 should be implemented. It is estimated that 480 person hours in the field will be required to adequately assess this site.

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# APPENDIX I-SKELETAL ANALYSIS

M. Cassandra Hill

MOBILE TENSAW DELTA SURVEY:
An Analysis of the Skeletal Sample

M. Cassandra Hill

for Panamerican Consultants, Inc., 1992

1Ba289: Collected from Area 1, Surface Shoreline

This was a small surface collection of the following skeletal elements: right humerus, right metacarpal, femoral diaphysis, mandible, left humerus, right femur, right scapula, radial diaphysis; Mandibular teeth: left central incisor [pronounced attrition], left second molar [extreme attrition - angular, toward tongue], right central incisor [pronounced attrition], right first premolar [pronounced attrition and brown staining by vegetable dye], right first molar [pronounced attrition], right third molar [occlusal caries]; Maxillary teeth: left lateral incisor [shovel-shaped; brown staining and calculus on the buccal surface]. These could be from one individual, as there is no duplication of elements and all of the bones have an overall robust appearance, with dense cortices. Based on appearance, the individual was an adult, possibly male.

There is also one crown of a deciduous right maxillary second molar, but no other subadult skeletal elements are present.

1Mb97: S.T.3, level 1

There is only one human skeletal element present: a medial phalanx of the left hand.

# APPENDIX II-SUMMARY OF HISTORIC ARTIFACTS

Table 3. Summary of Historic Ceramics and Glass.

| SITE NO | LOCAL/ AREA | ST No. | IF No. | A | *B | C | D | E | F | G | H | I | J | K | TOTAL CERAMICS | TOTAL GLASS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | 1 | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | 1 | | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | 2 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1Ba200 | | | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1Ba215 | | S | | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 1 |
| 1Ba289 | 1 | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 1Ba289 | | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 1Ba289 | 1 | S | | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 1 |
| 1Ba289 | 2 | S | | 0 | 2 | 0 | 0 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 2 | 7 |
| 1Mb97 | | 1 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| 1Mb97 | | S | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 1Mb97A | | 1 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | | | | 1 | 10 | 1 | 1 | 1 | 4 | 6 | 5 | 1 | 1 | 1 | 14 | 18 |

*Ceramics and Glass:
A-whiteware plain; B-albany stoneware; C-albany and red stoneware; D-bristol and albany stoneware; E-Rockingham/ Bennington stoneware; F-clear glass; G-amber glass; H-light green glass; I-red beer bottle glass; J-clear improved tooled finish bottle; K-clear applied tooled finish bottle.

Table 4. Summary of Metal Artifacts.

| SITE NO | LOCALE AREA | FS NO | ST NO | A* | B | C | D | E | F | G | H | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1Ba289 | 1 | | S | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 1Ba215 | | | S | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 |
| | 5 | 6 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1Mb97 | | | S | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 |
| 1Ba200 | | | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 1Ba200 | | | | 0 | 0 | 0 | 3 | 0 | 0 | 17 | 0 | 20 |
| 1Mb97A | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 1Mb97 | | | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 13 | 14 |
| 1Mb97 | | | S | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 1Mb97 | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1Ba289 | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 1Ba289 | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 1Ba289 | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 1Ba289 | 1 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 8 |
| Total | | | | 1 | 1 | 1 | 8 | 2 | 1 | 29 | 19 | 62 |

*
Metal:
A-axe head; B-lead weight; C-square nail; D-round nail;
E-metal hook; F-iron rod; G-unidentified; H-shell casing.